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CEMBER, 1948
Vol. XXV, No. 2

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25 TWENTY-FIFTH YEAR OF PUBLICATION

Outlook for 1949. A consensus of opinion among 112 leading economists polled by F. W. Dodge Corporation indicates moderate adjustments and only mild changes in current economic trends (wholesale prices, industrial production, employment and construction) during the coming year. The group polled includes economists in business corporations, financial institutions, universities and economic research organizations.

* * *

Furniture Market News. After kicking the show dates around since last July, the advisory boards have finally decided on January 3 through 15 for Chicago, and January 17 through 22 for New York. Lack of hotel accommodations in Chicago defeated the justifiable move to hold the markets later in January to avoid interference with New Year holidays for long distance travelers. It is hoped that the change may be made effective for 1950.

* * *

Fire-Resistant Fluid. A new fire-resistant hydraulic fluid for use in aviation is announced. The new product has long been sought as a vital factor in safe operations of modern air transport and war planes.

In a joint announcement, the Douglas Aircraft and Monsanto Chemical Companies described the new fluid as a synthetic liquid combining most of the desirable characteristics of existing hydraulic fluids with fire-resistant qualities never before attained.

High Buying Level. Purchases of electric motors, generators, adjustable-speed drives, and controls by the nation's key industries in 1949 to drive their production machines and power their processing lines will match, and may well exceed, 1948's high buying level.

That is the concensus of 58 district managers and field sales engineers from 27 cities across the country of one major manufacturer of electrical equipment, The Reliance Electric & Engineering Co. of Cleveland and Ashtabula, O.

Plant expansion projects and equipment modernization programs which many producers of industrial goods and consumer products have either on the drawing board or in the blueprint stage, installation of additional generating capacity by electric utility companies to meet long-range power requirements of industry and home, factory and farm, and increased mechanization of operations to offset rising production costs were cited in the survey as three of the principal bases of expectations that electrical equipment purchases by industrial consumers would continue at a brisk pace next year.

* * *

Ferro Training Course. October 1 was graduation day for 24 process control men enrolled in the second 1948 session of the Ferro Training Course. Enrolling at the company's laboratories on September 20, the

(Continued on page 8)

Finishing SYSTEMS

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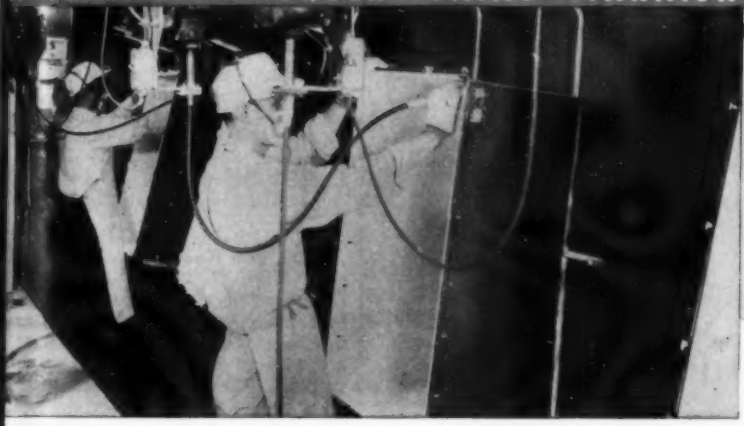

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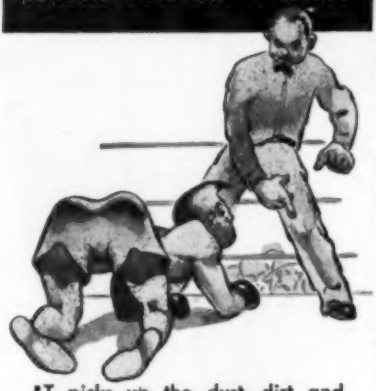

IT picks up the dust, dirt and specks that spoil paint jobs. It assures a pride-arousing finish job and a profitable one. Get them from your dealer or write us.

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"students", hailing from points as far distant as Sackville, New Brunswick, completed a comprehensive two weeks' curriculum covering all phases of process control in Porcelain enameling operation.

Emphasis was placed throughout on the practical application of control theories and procedures. Extensive lecture and laboratory sessions covered preparation of metals for porcelain enameling, preparation of standard control solutions, nicked dip practice, testing of metal cleaning and pickling solutions. At this juncture an examination was given, after which the students covered the properties and behavior of cover coats, etc.

* * *

Flock in a New Role. One of Packard Motor Co.'s service stations in New York has started a new service, that of regenerating the dilapidated interiors of old cars. Fabric patches are adhered to torn seats with a plastic glue. Then an adhesive is applied to the ceiling, sides and rear-seat floor. Next, flock is sprayed on the wet adhesive.

* * *

New Furniture Styles. There seems to be a concerted move among furniture manufacturers, especially the Southern bedroom furniture group to scrap current lines entirely and come out with new numbers for the January markets. Producers say there will be no appreciable price reductions, but that the improvements in the new lines will carry no increase in price. Some manufacturers have engaged professional designers and given them a free hand in developing new styles.

* * *

Automatic Air Line Filter is available with a transparent bowl and ribbon type filtering element that removes solids 10-microns and larger

(Continued on page 133)

TEMPERATURE? PRODUCTION?

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FINISHING Automatic

General Paint Foreman of G. E. automatic washing machine plant, Home Laundry Division, explains how a well engineered system, fine equipment, proper surface preparation, controlled thickness of film, and protection of the wet coats from dust, produces a durable, gleaming white finish on company's products.

Completed G.E. automatic washing machine.

By C. Humphries

IN PRODUCTION finishing the system is of first importance. Built around the system must be modern, adequate and well engineered equipment. Well trained reliable personnel complete the formula for producing a durable, satisfactory and economical finish on any product. We believe we have attained that end.

Our system is not unusual; in fact it is very simple. It includes metal cleaning, rust-proofing, surface etching, spraying the primer coat, baking the primer coat, spraying the top coat of enamel and baking the enamel coat. The proper employment of equipment, as well as a wise selection of all materials, and the methods used—all of these factors combine to produce a finish that meets the required rigid specifications.

The overhead finishing conveyor is 3500-ft. long, with hangers spaced on 3-ft. centers. It operates through a variable-speed drive at 10-ft. per minute.

Circulating Paint to Spray Booths

The central paint supply system includes space for the storage of drums of material. Since only two colors are used, black and white,

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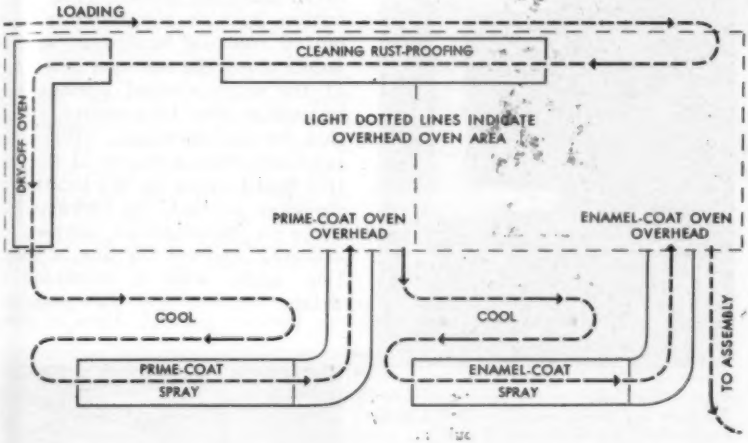
Washing Machines

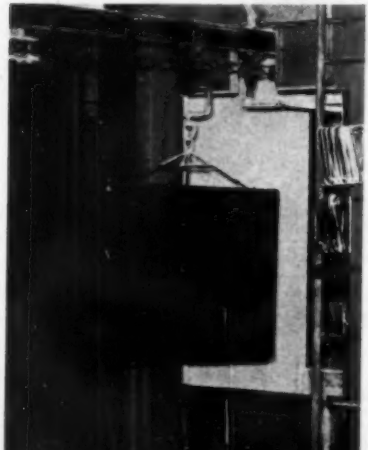


there are four 120-gallon tanks—two for mixing and two for the supply lines. Paint circulated through the system passes through filters in the outgoing line.

Spray booths are of the water curtain type; they are enclosed in metal panel rooms, the long sides of which have safety glass windows. Each room is maintained under a slight pressure, equivalent to 3000-cu. ft. per minute of excess air supply. To obtain this condition, 48,000-cu. ft. per minute of filtered air is drawn into the room, while the fans exhaust a total of only 45,000-cu. ft. per minute. The pressurized area of the spray rooms extends through completely enclosed metal tunnels which lead to the bake oven. This pressurized enclosure protects the wet coats from any dust or other air-borne particles.

Bake Ovens Have Safety Features

Bake ovens for both the prime coat and final enamel coat are of the A-type, indirect gas-fired, with air recirculation. All make-up fresh air that is drawn into the ovens is filtered. Both ovens are adequately provided with safety features. Certain panel sections of the oven roofs are loosely held in place on the side walls with chains so that any sudden pressure inside the

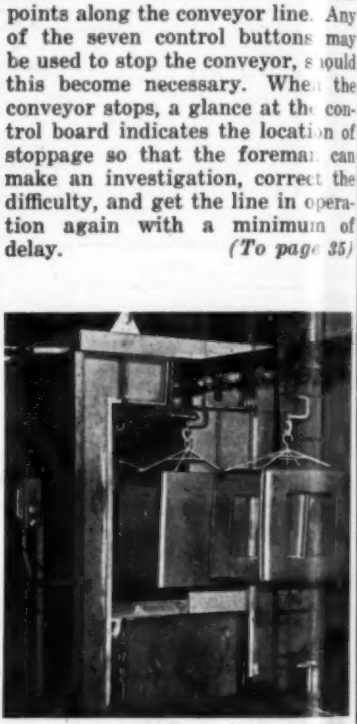


After being baked in the prime-coat oven, the parts are conveyed to the second spray booth where the finish coat is put on.

oven will permit controlled expansion of the roof sections, thus preventing permanent displacement and serious damage in case of an explosion.

Each of the two ovens is also equipped with two flammable gas analyzers and an alarm system. One head is located just inside the entrance to the oven; the other one is just beyond the first turn of the conveyor line. Evaporation of solvents is greatest at these points. Should a concentration of gases accumulate in the oven, an alarm sounds on the control board, while the loose roof sections act as a possible safety valve.

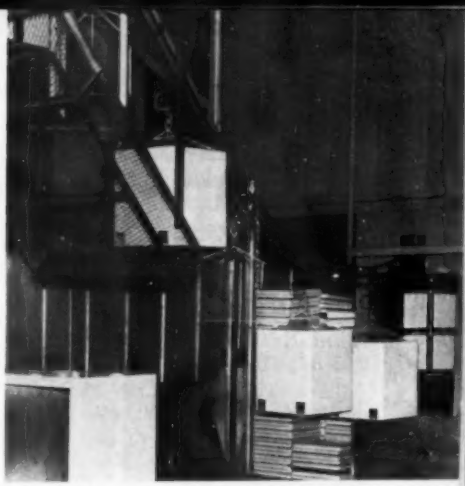
Two large control boards are conveniently located under the oven enclosures. One board controls the operation of the conveyor, spray booths, washer, exhaust system and ovens. The other board is equipped with an annunciator which has seven small red button lights. Each button light is connected to push button controls located at various points along the conveyor line. Any of the seven control buttons may be used to stop the conveyor, should this become necessary. When the conveyor stops, a glance at the control board indicates the location of stoppage so that the foreman can make an investigation, correct the difficulty, and get the line in operation again with a minimum of delay. *(To page 35)*



Cabinets, tops and hinged covers entering the spray booth in which the primer coat is applied. This booth has fluorescent lighting, filtered and heated make-up air supply, and glass panels through which visitors may view the coating operations.

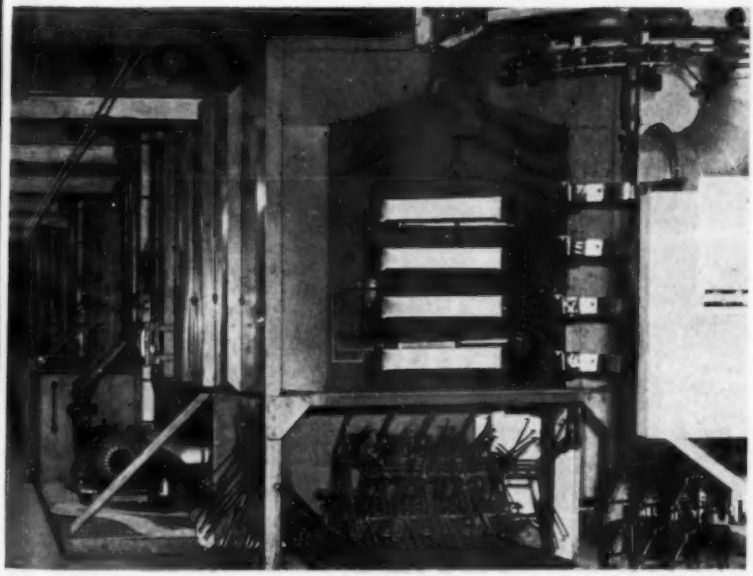
Surface Preparation Before Prime Coat

Washing machine cabinets and parts, suspended from the conveyor, pass through a 5-stage washer where they are sprayed with a hot alkali cleaner with emulsion added. This is followed by two hot-water rinses—the first at 150° F., the second at 135° F. Next, a hot rust-proofing solution is sprayed over the surfaces; this is followed by a cold-water rinse. The last operation is a mild chromic acid treatment sprayed at a temperature of 150° F. Excess moisture is blown off just outside the 5-stage washer, before the cabinets enter the dry-



Automatic washing machine cabinets coming out of finish-coat baking oven and being conveyed to assembly area. Note expanded metal guards under the elevated conveyor.

Entrance to the metal cleaning, rust-proofing and surface-treating setup which is about 140-ft. in length. Following treatment here the metal parts move through a dry-off oven.

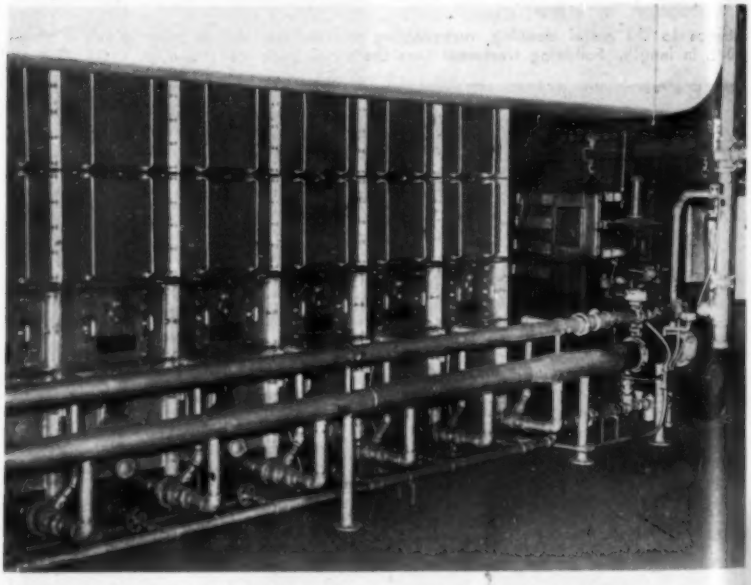


off oven where their surfaces are dried at 300° F. The length of time in the washer and dry-off oven is 30 minutes. As the work travels by conveyor from the dry-off oven to the prime-coat spray booth, it is subjected to 15 minutes of cooling with the aid of fans.

Alkali-Resistant Black Primer

Three operators spray the parts with a flat, black, synthetic enamel primer at a viscosity of 35 seconds, as measured by the No. 2 Zahn viscosity cup. (Temperature of the material, during these viscosity tests, is 75° F.) The prime coat is baked for 57 minutes at 360° F.

There are three excellent reasons for using this flat black primer. Chief reason is that *it is highly resistant to alkali*—and in an automatic washing machine, in which all types of soap and cleaning agents are likely to be used, this is highly important. Next reason is that we require a total film thickness of 2-mills plus. The primer coat produces a film thickness of ½-mill. In order to cover the black primer completely, spray operators must apply white enamel to the thickness of 1.7-mills, or the black prim-



Part of the heater installation for prime-coat oven. Actually there are seven sections of gas-fired indirect-type air heaters, having a total rated capacity of 3½ million BTU's per hour. Photograph, courtesy of J. O. Ross Engineering Corporation.

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A new development in a concentrated Phosphoric Acid Cleaner, for wash-off or immersion type of cleaning. Recommended for use in hot or cold solutions containing as much as 5 parts of water. Acts in 1 to 2 minutes. Dissolves surface rust and corrosive salts. Prepares surface with a light etch for better paint adhesion. An excellent rinse for use after alkali stripping or cleaning.

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er will show through. Third reason is that the use of a black primer aids our inspectors in finding areas that are not sufficiently coated. Unless a full coat of 1.7-mills thickness is uniformly applied over the entire surface, the thin places will show a blue color.

After the prime coat has been baked the cabinets cool for 15 minutes (aided by fans) before they enter the 4-man finish-coat spray booth. Here a double wet coat of white alkyd-resin enamel is applied at a viscosity of 45 seconds, as measured by a No. 2 Zahn cup. Cabinets and parts pass through the metal-enclosed pressurized tunnel until they reach the bake oven where the double top coat is cured for 39 minutes at 275° F. The cabinets cool as they travel from the finishing room to assembly.

New Mid Western Plant For Egyptain Lacquer

Mr. O. J. S. deBrun, president of The Egyptian Lacquer Mfg. Co., announced in New York that construction of the company's mid-western division has been started.

The new plant will be in Lafayette, Ind., on the Cincinnati to Chicago highway (No. 52) about 120 miles south of Chicago and 60 miles northwest of Indianapolis.

Products will include the complete line of synthetic and lacquer industrial finishes and thinning materials now manufactured in Egyptian's eastern division.

For over 50 years the company's plant and laboratories have been situated in northern New Jersey—for the major part of the time, at its present site in South Kearny. Shortly after the recent war it was decided that the requirements of mid-western users of quality product finishes could be filled better from a point closer at hand. The large modern New Jersey plant will continue to serve the Atlantic seaboard states.

The new Lafayette Division will have production equipment of advanced design. The entire plant has been carefully planned so that the most modern methods of producing finishing materials may be employed. Product development labo tories sufficiently extensive to provide independent treatment of the mid-we ern users finishing problems will be p vided. Completion of the structure planned for early 1949.

Nils Bolin will be manager of Egyptian's mid-western division at Lafayette, Indiana

The plant will be under the mana ment of Mr. Nils Bolin. Persons seeki further information may communic with The Egyptian Lacquer Mfg. C R. K. O. Building, Radio City, N. Y. 20, N. Y. or Mr. Bolin in Lafayette, I

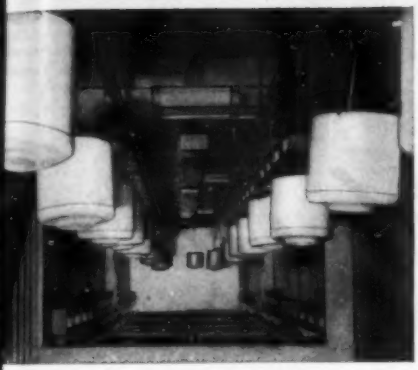
New Research Director at Metric Lacquer

The Metric Lacquer Mfg. Co., Irvi ton, N. J., announces the appointment Dr. Marcus Thau as Director of Resear Development and Production. Dr. Th previously associated in a similar ca city with a firm in Brooklyn, N. Y., bri to his new position more than 25 ye of experience in the field of protect and decorative coatings.

Dr. Thau becomes Research Director for Metric Lacquer Mfg. Company, Inc.

Dr. Thau's work includes developmen with numerous dyes, synthetic resins a long list of specialized industrial finish Among his most important contributio in recent years is the development of t terior aircraft finishes designed to redu friction in flight and thereby increa the speed of military planes.

PROVE BURDETT'S CLAIMS TO YOUR OWN SATISFACTION!



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PROVE to yourself the advantages of **Burdett (Radiant Heat) Gas Systems.** Accept our invitation to test your own products on the equipment now in operation at the Burdett plant. Seeing is believing—and certainly you want your costs as low as possible... particularly so where quality is also assured. **Write—wire—or phone us** to insure an early appointment. There's no obligation.

IF YOU CANNOT DO THIS, Then, in all fairness to your duties, send us all pertinent facts about your production, giving type of product, drying specifications of present paint, load and oven dimensions, etc., for our recommendation.

REMEMBER Burdett Systems are equally outstanding in drying, baking, roasting, cooking, metal melting, annealing, etc. They are fully adaptable to both old and new installations.

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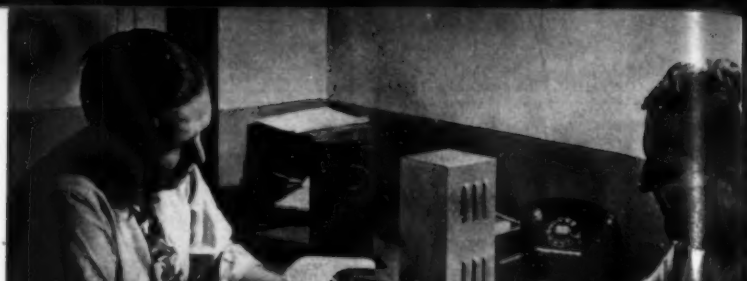


Robert J. Heartz, president of Jeavons Japanning Co., is shown checking wrinkle-finished samples from production with plant superintendent. This custom job shop, which handles a varied assortment of work, specializes in the application of fine wrinkle finishes.

Wrinkle Finish

AS IT IS USED IN A CUSTOM SHOP

By Arthur Schulze

AS MORE CONCERNS become aware of the merits of wrinkle finishes, we find this textured coating in more extensive use in production finishing departments and in custom-finishing job shops. A typically modern custom finishing shop—the Jeavons Japanning Co.,* Cleveland, Ohio — finishes a wide variety of products in wrinkle coatings. In this shop the technique of working with wrinkle finishes has been improved in many ways.

From within a 500-mile radius of Cleveland, products and parts, both new and reconditioned, flow to the Jeavons custom shop for fin-

In this custom shop a variety of metal products are painted with wrinkle enamel—some of it white, all baked. Use of a thin primer coat is advocated.

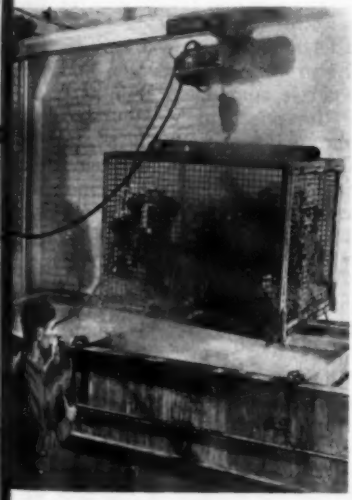
*This firm is one of the oldest in the country, having been established in 1875.

shing or refinishing. These products range widely in size and shape —from a ¼-oz. spring to an 800-lb. electrical cabinet. Cash registers, typewriters, adding machines, vacuum cleaner components, furnace jackets, aircraft instrument panels, electric fans, control and switchboard panels are finished in wrinkle. In fact, wrinkle finished products account for about a third of this company's annual production.

Custom Shop Serves Firms and Individuals

In addition to taking care of the finishing requirements of manufacturers who do not have adequate facilities of their own, the custom shop also serves plants that operate their own finishing departments. In these instances the custom shop's service may take one of several forms; for example, coating parts in special colors or with finishes that are not regularly run on the manufacturer's own production line; or finishing small quantities of parts which would involve considerable expense if the manufacturer had to set up especially for them.

But that is not all. This custom shop caters to the individual as well. It is one of the few custom shops where an individual can walk in with a household article or other item and have it finished. Also, it is one of the few concerns that use white wrinkle enamel successfully. Christmas decorations and vending machines offer two outstanding examples of products finished in white wrinkle enamel.



Quick dip in hot alkaline cleaning solution thoroughly cleans metal parts of oil, grease and other foreign matter before finishing. The electric lift-hoist and overhead crane-way simplify the job of material handling.

Spray Booths, Ovens, Conveyors, and . . .

With 38,000-sq. ft. of floor space on three floors the Jeavons finishing shop has front and rear loading docks at truck level. Flexibility of operation, which enables the firm to meet diverse customer requirements, is attained through the use of modern equipment. This equipment includes cleaning facilities, 10 spray booths (three water-wash, seven dry) and 20 gas-fired convection ovens. The spray booths and ovens vary in size to accommodate a variety of parts.

Each of three ovens, 20-ft. long, 8-ft. wide and 7-ft. high, has a conveyor extending lengthwise through it. Each one of ten ovens is 9-ft. long, 5-ft. wide and 8-ft.

Bathroom scale housings being sprayed with white enamel in waterwash-type spray booth.

high. Others are of various sizes. In four automatically operated units, the baking temperature can be controlled within five degrees, plus or minus. All oven equipment is calibrated once a month with heat-recording instruments to make certain that oven thermometers check accurately with a given standard.

Cleaning and Surface Preparation

Parts sheduled to be finished with wrinkle enamel are prepared in a 3-section cleaning tank, each section of which provides a capacity of 350 gallons. Immersion of the work in a hot alkaline solution (180° F.) removes all oil and grease. This treatment is followed by a cold water rinse, then a hot water rinse. Then the work is given a phosphoric acid rinse to etch the metal surfaces minutely for the subsequent finish.

Thin Primer Coat; Wrinkle Coat; Baking

Surfaces of the products to be finished first receive a thin coating of flash primer which is sprayed on, the pressure at the material tank being 4 to 6-lbs. per square inch. The surfaces are then sprayed with the wrinkle coat at a tank pressure of 10 to 12-lbs. (depending on the viscosity of the material) and at an atomizing pressure of 45 to 55-lbs. at the gun nozzle.

Baking completes the finishing cycle. Baking schedules vary, depending upon the type of material used and the parts or products being processed. For white and pastel wrinkle enamels, schedules of 250° F. for one hour, or 300° F. for 45 minutes have proved to be effective. On black and colored wrinkle enamels the baking temperatures are higher; for example, 350° for 30 minutes or 400° F. for 15 minutes.

While finishing with wrinkle enamel has become widely established and accepted among hundreds of product finishers as a single-coat system (one requiring no primer application) Mr. R. J. Heartz, head of the Jeavons Japanning Co., believes that the use of a thin primer coat contributes to better uniformity of the final wrinkle pattern. "Putting on a primer coat may appear costly at first glance", he admits, "but in our experience during the past few

TAKE A TIP and get better acquainted with *Vedoc* finishes, an outstanding line of *organic* industrial coatings. All *Vedoc* finishes are developed for a specific use, then slightly varied to best fit each customer's production setup. Let us tell you more about them!

LIQUID PLASTICS DIVISION

FERRO ENAMEL CORPORATION

4150 East 56th Street

CLEVELAND 5, OHIO

years, working with a large assortment of parts in both large and small quantities and involving many base materials, we have found that this practice pays off. We have improved quality and fewer rejects. In our own case, primer application has helped to keep rejects at less than one-half of 1% of total production."

Durable Finish on a Rough Surface

The use of wrinkle enamels enables the manufacturer of products to purchase and use metal which ordinarily could not be finished with regular smooth finishes without being smoothed, or filled or treated in some way to make th surface practically flawless. Sinc wrinkle coatings hide most surfac defects and imperfections, their us often results in important econo mies by eliminating the need o certain surface smoothing and pre paratory operations.

Extra resistance to marring chipping or peeling is another fea ture of good wrinkle enamels, ac cording to Mr. Heartz. "If th surface is properly prepared and i the wrinkle enamel is baked in ac cordance with the manufacturer' recommendation, the resultant fi ish is an extremely durable coa ing. It will withstand a tremen dous amount of handling witho

Wrinkle-finished panels for electrical equipment cabinets are shown leaving the ov

From lipstick cases to locomotives . . .

when the *Finish* has to be just right . . . thousands specify

EGYPTIAN

INDUSTRIAL FINISHES

The Egyptian Lacquer Manufacturing Co.
P. O. Box 444, Newark 1, N. J.

SYNTHETICS • LACQUERS • REDUCERS • THINNERS

showing any ill effects." Then, too, a full color range assures the possibility of added attractiveness and sales appeal.

The application of protective-decorative wrinkle finishes has posed no new, unusual, or difficult problems at the Jeavons plant. Placed in the hands of properly trained personnel, wrinkle enamel is handled with the same relative ease of any other organic coating.

Wrinkle Enamel is Easy to Put on

"There are no secrets or tricks in wrinkle finishing", Mr. Heartz declares. "The real secret—if it can be termed that—in applying wrinkle coatings effectively lies in first having a clean surface and then carefully applying the material, the very same basic requirements that guide the industrial finisher when he is using any other material to produce an attractive, long-lasting finish."

Wrinkle enamels have excellent package stability, provided the containers are kept tightly sealed. This feature enables either the job shop or production department to maintain an adequate stock of material for meeting finishing contingencies.

At Jeavons Japanning Co., where quality is the watchword in finishing, the application of wrinkle enamels for finishing new products and reconditioned items has increased rapidly in recent years, and the firm is counting on its continued use in the future.

Kirk & Blum Elects Officers

The Kirk & Blum Mfg. Co., Cincinnati, Ohio, manufacturers and designers of dust-collecting and fume-removal systems and ovens, announces the election of officers of the company occasioned by the death of the former president, R. J. Blum, on October 18, 1948. Officers and directors of the company elected at a meeting of stockholders on November 10 are shown seated, left to right, F. G. Weber, Assistant Secretary Treasurer, O. F. Tenoever, Treasurer, W. R. Meuttman, Vice President, R. J. Blum, Jr., President, C. F. Wulff, Vice President, E. A. Vogel, Secretary, F. A. Zink, Director. The board of directors includes, in addition to the above officers, Mrs. S. W. Kirk, and Mrs. R. J. Blum.

Standing in the back row, left to right, R. W. Neu, Joseph A. Breeze, R. B. Werner, C. S. Fehrman, Joseph Hetzler, C. S. Sulton, John Hetzer, S. L. Cox, M. G. Stock, E. H. Carsey, E. W. Thery.

The Kirk & Blum Mfg. Co. was founded in 1907 by the late Sylvester W. Kirk and Richard J. Blum, as a sheet metal shop specializing in the design of fabrication and installation of dust-collecting systems for industrial plants. It has since grown to a position of national leadership in the field.

Men of the present Kirk & Blum Mfg. Co., 2838 Spring Grove Ave., Cincinnati, Ohio.

SPECIALISTS
in fine
INDUSTRIAL
FINISHES

Manufacturing a
COMPLETE
Line of Industrial
and automotive finishes
for many of the
country's finest
firms.

STRATHMORE PRODUCTS INC.

Send us your most difficult problem. Our laboratory staff is second to none.

Strathmore Products, Inc.
1970 W. FAYETTE ST. SYRACUSE, N. Y.
Specialists in Fine Industrial Finishes

—New Jersey Factory—
Unifilm Paint Company
SOMERVILLE, N. J.

WHAT WE DID TO AVOID HAVING

DUST SPECKS in the AIR

BY J. ILLASZEWICZ, B. A. Sc.
General Superintendent
Victoriaville Furniture, Ltd.

SINCE OUR PLANT adopted conveyorized finishing, the presence of a little dust became a serious problem. The finishing of quality furniture on a production basis calls for mild circulation of clean air in the finishing room. In many conveyorized furniture finishing systems lacquer is used as the final coat, and because of lacquer's rapid drying characteristics some dust troubles are avoided.

Formerly we used a 12-hour air-drying rubbing varnish for the top coat, but when conveyorized finishing was adopted we changed to a synthetic material. We use an Alkyd-urea base clear finish for the final coat. This material is similar in many respects to the varnish formerly used, insofar as results are concerned; it stands up well under rubbing and polishing.

Changing over to conveyorized finishing necessitated several changes in the finishing room. For instance, we put in more spray booths; also, we added force-dry ovens which are heated up to 125° to 150° F.

More Exhaust Fans; More Intake Air

The added exhaust fans in spray booths and ovens naturally increased the load on our air supply for the finishing room. In some areas the demand increased to as much as 15 to 20 changes of air per hour. Naturally, with the addition of more exhaust fans, the pull on the air supply was increased, and likewise the possibility of circulating dust was increased.

In the change-over to conveyorized finishing we had to do some experimenting with different materials, temperatures, conveyor speeds, etc. One of the chief sources of trouble was that dust circulated in the air and settled on the wet finish. It was especially noticeable just outside the spray booth for top coats, during the flash drying period, and inside the oven where the final coat is baked, before the synthetic finish became dry enough to be dust free.

Air Filters Placed Where Air Comes In

The solution of this difficulty was found by checking all air intakes and installing air filters in them. *Of course, cleanliness in the finishing department and all adjacent departments is always important.*

(Continued on page 50)

this is Stanley Chemical

OUR RESEARCH LABORATORIES and manufacturing facilities combine to produce industrial coatings for every requirement. Leading manufacturers use Stanley's experience and know-how to provide their products with better finishes . . . greater protection . . . added sales appeal. A recent development is STANTITE Spraying Primer . . . for use under air-dried or baked finishes. STANTITE adheres to all metals, glass, and many plastics . . . prevents rust creep . . . dries quickly at room temperature . . . eliminates metal surface preparations other than cleaning. For a solution to *your* finishing problems, consult the Stanley Chemical Company, East Berlin, Connecticut.

STANLEY

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INDUSTRIAL COATINGS

LACQUERS SYNTHETICS JAPANS ENAMELS

Sanding stations were strategically located and adequately protected by a dust-collecting system when they had to be located close to spray booths or ovens—these locations being governed by the physical layout of the buildings. All openings in the floor and ceiling were closed to make them as nearly air-tight as possible.

The only way to eliminate dust is to carefully control the sources of fresh air intake, so that the air will be cleaned as it comes in through filters. Provision was also made to pass clean fresh air over heating coils during the winter months.

Heat and Humidity Control System

The ovens on the conveyor line were supplied with automatic temperature and humidity controls by the firm that put in all of the basic installation. However, it was necessary to establish correct settings for all controls, and we had to correct the initial design of some of the ovens.

The temperature control in the finishing room itself was provided by making additional openings through the roof, these openings being properly located and adequately protected. Each opening was fitted with an electrical-driven exhaust fan.

An automatic temperature and humidity control system for the finishing room itself is proposed; this will provide more efficient control during the winter months.

This control system which we installed, not only improved working conditions, but it proved to be an important factor in controlling t viscosity of all finishing materia and the performance of these m terials when they were applied the surfaces of our products. *Clea liness, plus clean air and controll atmospheric conditions in the fi ishing room, really solved our du problem.*

Sherwin-Williams Appoints Industrial Sales Managers

Following a program of expansion the industrial field, Sherwin-Williams C announces the appointment of Mr. E. Steger who will be in charge of the ne Textile Industrial Zone, with headqua ters in Charlotte, N. C. Mr. D. S. Shim will head the Southeastern Industr Zone with offices in Atlanta, Ga. Mr. R. Stevenson will manage the Gulf I dustrial Zone, with headquarters Dallas, Texas.

These three men are well qualifi through past experience, to handle t expanded sales and specialized service Sherwin-Williams' industrial customers.

Right: D. S. Shimp.

Lower Left: E. H. Steger.

Lower Right: J. R. Stevenson

MEMO

For a rich, durable finish you can't beat . . .

RANDOLPH
ONE COAT BAKING
TEXTURE ENAMEL

(Available in wide range of colors)

These fine Randolph Texture finishes — known for their uniformity — can be used over rough castings, plain and polished metal — or on any surface that will stand baking.

No surface preparation required. These finishes will cover all imperfections.

The services of our skilled technicians are always available to help you get precisely the form and size of design that you require. Submit your problem. Without cost or obligation to you we will be glad to make recommendations.

Randolph
PRODUCTS COMPANY
Carlstadt, New Jersey

DOPES · LACQUERS · ENAMELS

Rad. Htg. Committee Inspects Ovens at St. Louis Plant

Sixteen members of the Radiant Heating Committee of the American Institute of Electrical Engineers were the guests of the Ford Motor Co., on October 21st, at its Lincoln-Mercury Division Plant at St. Louis, Mo. The Committee commended the Ford Motor Co. on its pioneering and development of electric infra-red heating. The meeting and plant visitation were intended to celebrate the tenth anniversary of this type of heating first installed at the company's River Rouge Plant by Mr. F. J. Groven.

The Institute Committee, which is sponsoring further development of electric heating, is made up of representatives from equipment manufacturers, electric utility companies, instrument manufacturers, engineering professors from several leading universities, lamp manufacturers, advisors from the paint and textile industries, and leading industrial users of electrical radiant heating.

The Committee was appointed by Everett S. Lee, President of the American Institute of Electrical Engineers, and its activities are directed by Paul H. Goodell of the Trumbull Elec. Mfg. Co., as Chairman, and Mr. Charles E. Russell of the Philadelphia Electric Co., Secretary.

The Committee inspected eight of the new type ovens which combine controlled convection with infra-red heating to provide better curing of synthetic enamel finishes with reduced time and floor space requirements. The eight ovens handle a heating load of approximately 60 tons per hour, with a maximum demand of 3000 kilowatts. This represents a production of 40 cars per hour with two coats of finish baked with the electric heating at 325° F.

The ovens are reported to save approximately 20,000-sq. ft. of floor space, as compared with former types of convection heating. The power demands of the new ovens have been reduced over 40%, with the result that a single coat of enamel is baked on a sedan body with energy consumption of only 16 kilowatt hours. The ovens are used for baking the finish on bodies, fenders, hoods, wheels, and other sheet metal parts. They range in size from 100 to 700 kilowatts each, and in length from 25 to 170-ft.

Front Row, Left to Right: Wm. H. Wagner, L. E. Cole, E. J. Bates, L. E. Stout, J. E. Johanson, Earl Benson, V. G. Richardson of the Ford Motor Co.

Second Row, Left to Right: P. O. Blackmore, W. H. Wannamaker, Paul H. Goodell, Committee Chairman; C. E. Russell, Committee Secretary; O. C. Wallace, C. A. Casey.

Back Row, L. to R.: I. J. Barber, C. Heaton, E. A. Lindsey, J. E. Sump, R. J. Might, W. F. Hickes, C. T. Prendergast.

GEORGE KOCH SONS, INC.

You are paying for this

Workmen are always in the natural position to do their best work — at high production rates.

DE BURGH
CONVEYOR SYSTEM

-BUT YOU COULD HAVE IT WORKING FOR YOU AND INCREASING YOUR PROFITS!

Every furniture manufacturer who sees this KOCH-ENGINEERED system in operation instantly realizes the big price he's paying for out-of-date finishing methods. You yourself can quickly see its worth just by studying the two illustrations here shown.

No waste motions. No waiting time. The piece is always right where it should be for maximum productive man-hours.

With the DeBurgh Conveyor you can do inspection, white sanding, putty work, spraying, wiping, drying, sanding striping, decorating, shading, glazing, rubbing, attaching hardware, wrapping, touch up work and packing ***all on one conveyor.***

No danger of dirt falling from overhead conveyors. No lateral sway or pendulous movement. No lifting or pushing heavy pieces.

The DeBurgh Conveyor System is ***specially designed for the furniture industry.*** It gives from 100% to 300% increased production and usually effects labor savings in excess of 50%. Ask us to show you what it can do for ***your*** finishing department.

Send for Circular E-5

GEORGE KOCH SONS, INC., EVANSVILLE 4, INDIANA

COMPLETE FINISHING SYSTEMS

Special RUBBER-BASE Finishes For

Rubber Products

By Herbert H. Watjen

Rubber Color Department
Sinclair & Valentine Co.

APPLICATION of the ordinary finishing materials to some articles made of natural or synthetic rubber stocks is unsatisfactory. Rubber articles have many unique characteristics that cause the usual finishes to fail or give only mediocre service. Special finishes with a rubber base have been developed to coat such articles.

There are several classes of rubber articles that often receive a finish of some type, for example:

1) Sheets, aprons, proofed goods.
2) Toys for children, molded and latex types, such as dolls or animals.
3) Household accessories.
4) Balloons.
5) Footwear (boots, rubbers).

Generally lacquers and enamels are used for these articles. However, the adhesion of many lacquers is not always perfect, especially when the rubber surface is highly polished. In other cases, where the article is elastic, the finish does not stretch with the rubber and it chips off. The abrasion resistance of lacquers that have only fair adhesion to the rubber is poor.

Adhesion and Stretch Needed in Paints

Use of rubber-based coatings eliminates these difficulties. The rubber in the coating has the required elasticity so that it does not chip off. The solvent in the rubber coating will attack the rubber article and cause the coating to adhere firmly to the article. This adhesion can be improved by vulcanization or curing of the coatings on to the base rubber. This

Quality of rubber-based coatings for use on rubber products has been improved by new techniques of manufacture and formulation. Special coatings are used on many rubber articles where regular lacquers, enamels and paints would not do the job satisfactorily.

"We need the durability of a baked finish"

SALES MANAGER

get BOTH with ONE finish.... M&W's SYNPEX

Here's the finish for metal, wood or plastic products that satisfies both sales and production men. M&W's SYNPEX combines the beauty and durability of synthetic enamels along with the quick drying properties of lacquers. It's actually a combination of the best properties of both.

SYNPEX is available clear, or as metallic and enamel finishes in most colors. Applied by the spray or dip method, SYNPEX can be formulated for practically any baking or air-drying schedule.

See for yourself how SYNPEX can give your product lasting beauty for greater sales appeal and, at the same time, speed up your production. Write today for Technical Data Bulletin 106 or have an M&W sales engineer discuss your requirements with you privately.

"We need the drying speed of lacquer"

PRODUCTION MANAGER

PIONEERS IN PROTECTION M&W Co 1876

. . . where industry goes with finishing problems

MAAS & WALDSTEIN COMPANY NEWARK 4, NEW JERSEY

Boston 15, Mass. • Chicago 12, Ill. • Los Angeles 34, Calif.

Pacific Coast Division: SMITH-DAVIS CO., 10751 Venice Boulevard, Los Angeles 34

MANUFACTURERS OF INDUSTRIAL FINISHES

vulcanization will not harm the elastic properties of the coating. It may be performed in several ways, depending on compounding of the article itself.

The abrasion resistance of the rubber coating is very good because of the fine particle size of pigments in the rubber coating and because

This small balloon, made of thin rubber, carries a figure design and lettering in colored process paint which was applied by silk-screen stenciling. The adhesion of paint to rubber is excellent.

of the excellent adhesion to the article. The choice of solvents used in a rubber coating is quite important to obtain the adhesion and yet not cause the rubber article coated to swell or pucker excessively. A careful selection of solvent must be made, depending on the particular part or product to be coated with paint.

Wide Range of Color Possibilities

The color possibilities of rubber coatings are wide; a complete range is manufactured. Special consideration must be taken of the fact that some colors do not stand up under the curing of the rubber, while other colors bleed into the rubber stock. These colors must be eliminated, but there are still many excellent colors suitable for use on rubber.

The economy of these rubber-based paints has been demonstrated and is due to their great covering power. This can be observed on balloons. When the balloon is inflated, the rubber-based finish also stretches but still has good covering power.

Spray, Roller-Coat, Silk-Screen, or Dip

Modern finishing materials for rubber may be applied in different ways. They can be spread to completely cover the article or only part of it. They also lend themselves to other types of application, for example, to produce a design on the article. Printed decoration may be achieved in several ways—by roller, stamp, silk-screen, spraying (with mask), etc. With proper formulation, the rubber-based paints may be applied in any of the usual methods.

Formulation of these rubber paints is very important. Much depends on the type of surface upon which the paint is to be applied, the method of application, and the color and brightness required. The type of rubber used in the paint depends on the type of rubber in

Until recently, "tops" in resistance for whites was 18-20 hours in standard test solution at 160-165° F. Gradually, the demands have become more exacting. Users of white enamels for washing machines, kitchen equipment, bathroom fixtures and accessories have been asking for a BETTER, more durable white.

The Hilo Research Division has worked long and steadily to perfect a white that would stand up, under test, for 2 or 3 times 18-20 hours. In Hilo No. 2463 Alkali-Resistant White they have found the answer.

This new Hilo development stands up in the standard test for FIVE times 18-20 hours to establish a new high in alkali-resistance — to give manufacturers of products subject to soaps and detergents a "better best" in an Alkali-Resistant White.

Send for a trial lot. Just say you'll test it, and we'll send a sample without charge, transportation paid.

HILO

HILO VARNISH CORPORATION

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the surface to be coated. Generally, natural rubber is used, but it is best to use the same type of natural or synthetic rubber in the paint as was used in the article to be finished, to obtain the maximum adhesion and compatibility.

It is also important that the rubber be well broken-down or masticated prior to the compounding of the stock for the paint. If this is not done, solution of the stock into the solvents will be difficult; and the proper adhesion and elasticity will not be obtained when the paint is applied.

As mentioned previously, the range of colors is complete. To obtain maximum strength from the color used, it is advisable to use rubber dispersed colors or masterbatches. Otherwise the color will not be completely dispersed in the paint, and specks of color are liable to show in the finished coating.

What Enters Into Rubber-Base Paints

In conjunction with the colors, white pigments such as titanium dioxide, zinc oxide, lithopone, etc., are incorporated into the stock to obtain the brightness of color, high covering power, and opacity in the finished paint. Other pigments of a fine particle size are included to overcome the tackiness of the uncured rubber. Other agents such as lubricants for milling; anti-oxidants to minimize aging of the rubber; sulphur, accelerators, and retarders for proper vulcanization are also included in the paint stock.

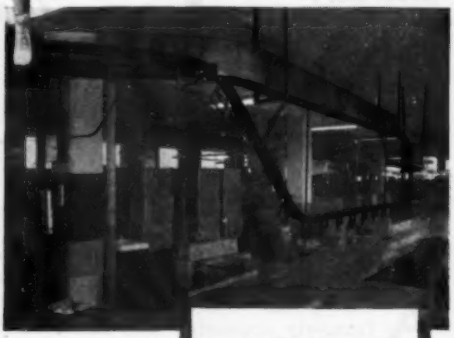
When the stock is all milled together on a 2-roll rubber mill, all pigments and compounding agents are uniformly dispersed in the masticated rubber. This stock is cut into small pieces and dissolved into solvents of the proper evaporation rate to form a smooth solution and suspension of the stock in the solvent.

Percentage of solids in this paint, as prepared, is usually about 50%, but the paint is reduced with the proper solvent for application. The method of application and the covering power required control the degree of dilution of the 50% paint. Thus, we have a rubber-based paint that performs much better on rubber articles than regular finishes. The drying time may be controlled by the type of solvent employed.

Rapid drying is necessary for the painting of designs on balloons. The paint is applied on a balloon partially inflated, and immediately after application the balloon is deflated. The rubber paint is not vulcanized when used on balloons. Since unvulcanized rubber is very tacky, pigments of a very fine particle size are compounded into the rubber stock to overcome this tackiness.

These rubber paints are only one of many types of specialty coatings developed for application upon specific products. The purpose of this article has not been to cover proper formulation, but to outline the steps of production and the methods of use of rubber-based paints. Because of the specialty nature of this type of finishing material, the paints generally must be custom made for each rubber article. A considerable amount of research is necessary to formulate the proper stock for each type of finish. END.

Curves that count



Lighten Materials Handling Loads with Richards-Wilcox ZIG-ZAG *Continuous Power Conveyor*

Designed for carrying light loads within a confined space, Richards-Wilcox ZIG-ZAG OveR-Way continuous power conveyors are serving production and processing lines in every imaginable industry—increasing efficiency, cutting costs. If you have perplexing handling problems to solve, call or write the nearest office of Richards-Wilcox . . . world's largest makers of power conveyors and door hardware . . . for free literature.

OveR-Way Conveyors Unburden Industry

3 Styles Solve Any Overhead Handling Problem

1

Richards-Wilcox Tru-Trad and Steel Beam OveR-Way for heavy loads up to 8,000 pounds.

2

Richards-Wilcox Tubular Trolley Track OveR-Way for medium loads up to 3,000 pounds.

3

Richards-Wilcox Zig-Zag Powered Chain OveR-Way for light loads to be conveyed through degreasing, finishing, baking and other processes facilitated by meandering conveyor track with power operated enclosed chain.

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"

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OVER 69 YEARS

Trouble?
Crowded?
Rejects?
Disorder?
Dust and Dirt?
Costs Too High?

Fix up your floor

By George A. Conrad

A CONCERN with which I was formerly connected had two spraying departments. The older department was upstairs. It had a wooden floor so splintered and full of holes that it constituted a risk for anyone who even walked on it. Being aware of the treacherous floor, we virtually carried the loaded trucks of work from spray booth to oven. We proceeded with such caution that, although we lost much time, little jostling of the work occurred.

The new department down stairs had a concrete floor which was as smooth as a ballroom except for one defective seam near the oven. Seldom a day passed but what a loaded truck became fouled on that seam, with consequent damage to its cargo. We soon repaired it.

What I wish to point out is that floors have an important bearing on efficient operations in any finishing room, and that minor defects in an otherwise good floor can be more troublesome than a really bad floor. Like tooth decay, such bad spots become worse if neglected.

Floors and Floor Space; Source of Trouble?

Wall and ceilings may furnish shelter, but *it is the floor space that earns and costs money.* Few plants ever had more floor space than they need, and even fewer utilize what they have to the fullest extent. Periodic inspection of floors should have two objectives: First, to gain every available square foot for working operations and elbow room. Second, to keep the floors in a state of constant repair and cleanliness.

Concerning the first objective it is important, not only that all trash be cleared away, but that all seldom-used material and equip-

PROT-O-CEL Offers Manufacturers 5 Variations of One Tested Basic Formula to Meet Specific Finishing Requirements

PROT-O-CEL is a rapid-drying, high-solids wood finish which is effecting substantial savings in time, labor, and material costs. To meet varying finishing requirements, we have developed five variations of the basic formula:

PROT-O-CEL*

A CELLULOSIC FINISH
MADE FROM NATURAL PROTEINS

REPRESENTATIVES WANTED

Desirable territory open for established representatives with following. Write us today, outlining experience and territory regularly covered.

AR-100
General all-purpose finish for brush, spray or dip applications.

AR-100-S
High solids finish, formulated especially for spray coating.

AR-100-D
One-coat process finish formulated especially for dipping.

AR-100-SD
High solids finish ideal for either spraying or dipping.

AR-100-1C
One-coat finish for hard woods.

The total solids content in any of the above finishes ranges from 35% to 45%. Ask us to ship you a 5-gallon can of any one of these variations together with PROT-O-CEL REDUCER XX-100 at the drum price.

*Registered U. S. Pat. Off.

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55 WEST 42nd STREET NEW YORK 18, N. Y.

ARMTONE

SYNTHETICS • LACQUERS • SEALERS • PRIMERS • ENAMELS

ment be removed from the working area. Everything that can possibly be hung on the walls should be disposed of in this manner. Shelving, built at strategic locations, provides valuable space for countless articles.

All containers of material and work that arrive for processing should be stored where they will not interfere with traffic; and they should be stacked to occupy the least space consistent with safety and convenience.

Empty crates and boxes should be dismantled or discarded if there is no outside storage space. Even large cartons may be slit where sealed, and stored flat. New sealing tape will quickly restore them when needed. It is good practice, as well as a space saver, to transfer odds and ends of paints to smaller containers.

Smooth, Sound, Clean Floor Profitable

In reference to the second objective, the finishing room floor does take a tremendous amount of abuse, therefore constant inspection is necessary. Fortunately, there are available many excellent repair materials especially developed for each type of floor or condition. Wide seams and low spots should be filled in; and high spots should be leveled off, giving special attention to the areas where oven trucks must travel. Minor repairs should be made as soon as possible, while larger jobs are scheduled for weekends.

Your floor is also the depository of 90% of the dust which menaces every sprayer's work. The poorer the floor, the more impossible it is to keep clean. Dust is retained in floor cracks until disturbed by drafts or traffic; then it usually floats into the spray booth's airstream or into the air circulation of the oven. This fact alone justifies the expense of making prompt and effective floor repairs. Painting such floors as wood or concrete pays real dividends. Also, it prolongs their useful life and makes cleaning easier. A clean painted floor improves the appearance of the entire establishment.

Metal Cleaning Conferences Held by Oakite

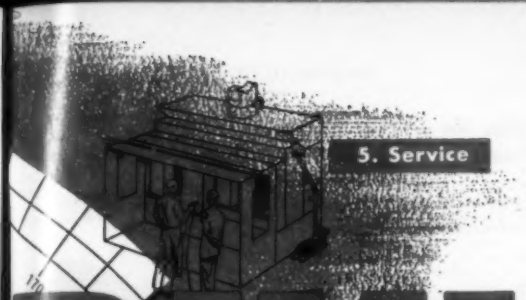
How recent developments in the field of cleaning and allied procedures are helping industry to combat rising production costs, was the central theme of a series of technical-sales conferences held in New York, Chicago, and Kansas City during November by Oakite Products, Inc.

The first of these regional conferences, held at the Hotel Pennsylvania, New York City, incorporated a program of lectures and round-table discussions attended by field service representatives of the company's New England, New York, Philadelphia, Southern and Canadian sales divisions. Highlighted on the conference agenda were special reports delivered by Oakite research chemists, service engineers and technical specialists on latest trends in metal cleaning. Also discussed were new Oakite materials and equipment to be made available to industry during the coming year.

Similar conferences held at the Hotel Sheraton, Chicago, November 22-24, and the Hotel President, Kansas City, November 29, 30 and December 1, were attended by Oakite field service representatives from the Chicago, Detroit and Central divisions, and the Pacific Coast, Midwestern and Southwestern sales territories.

Glidden to Expand Gum Plant

The Glidden Co., Cleveland, Ohio, announces expansion of its naval stores division plant at Valdosta, Ga. When completed the plant will be able to process more than 150,000 barrels of pine gum a year. It will be the only plant of its kind equipped to store sufficient gum through the non-producing season to permit all year round production.



BINKS
SPRAY FINISHING EQUIPMENT
your best buy!

1. Design The design of your Binks equipment has its start in large and small finishing departments where Binks designers study the performance of all existing equipment and then improve on it. Binks equipment is truly "shop designed."

2. Complete line From Binks catalog you can select every item you need for the application of any kind of sprayed finish. Whether it is a few cents' worth of fittings or a large Dynaprecipitor water wash spray booth, you will find it in standard line.

3. Efficiency You will find that the watch-like precision of Binks spray guns and the advanced engineering of all Binks equipment pays big dividends in finer finishes, faster operation, fewer rejects.

4. Economy You save money with Binks equipment . . . not only thru faster and better finishes but also in the longer service life of the equipment itself. Binks spray finishing equipment pays for itself long before obsolescence overtakes it.

5. Service No matter where your plant is located, there is a Binks service engineer nearby . . . to keep your equipment in A-1 operating condition and to answer your finishing questions.

In Brief If you want the best in finishing equipment . . . backed by a nationwide service . . . then, be sure you ask for Binks.

Binks MANUFACTURING COMPANY

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If you don't have a current Binks Catalog and Price List, send for one today.

New Air Gun Has No Springs, No Packing

An air gun without springs or packing has been developed by Paul Valve Corp., 683 Third Ave., New York 17. N. Y. The gun is operated by a thumb-actuated plunger and a stainless steel ball. It may be used on any line up to 100-lbs. per sq. in. pressure. It is available for ⅛-in. or ¼-in. hose sizes.

National Chemical Exposition

The 1948 National Chemical Exposition, held in the Chicago Coliseum, was the largest in the number of exhibits of the five biennial shows sponsored since 1940 by the Chicago Section of the American Chemical Society.

The show ran for five days from October 12 to 16. Admission was limited to representatives of the chemical and allied industries. There were 201 exhimitors.

Among other highlights were the facilities provided to aid manufacturers and business men seeking a solution of their production problems through the use of chemistry. Many availed themselves of the opportunity afforded to get authoritative information.

J. W. Cullen Represents Jones-Dabney Co.

The Jones-Dabney Co., Louisville, Ky., announces the appointment of Mr. J. W. Cullen as sales representative in the South Central States.

Mr. Cullen has been associated with the paint industry for the past 22 years.

J. W. Cullen now sales representative for Jones-Dabney Co. in the South Central States

From 1926 through 1940 he was with the Chicago branch of Devoe & Raynolds, first as Cost Accountant and later as Purchasing Agent. Since 1940 he has acted as Purchasing Agent for the Jones-Dabney Co. He has been active in the Louisville Paint, Varnish & Lacquer Association for the past several years.

Kendall, V. P. of International Rustproof Corp.

The International Rustproof Corp., Cleveland, Ohio, announces the appointment of Dr. Fred E. Kendall as Vice President, Director of Research and Sales.

Dr. Fred E. Kendall has been active in metal finishing and industrial research.

Dr. Kendall served as Chief Chemist in charge of electro-chemical research for Republic Steel Corp. for several years. He has been active in the metal finishing industry and applied industrial research and development chemistry, and has devoted most of his time to related processing problems. He was formerly a member of the chemistry staff at Western Reserve University, Cleveland, Ohio, and later as Associate Professor of Chemistry at the University of Maryland.

Behr-Manning Flock Fibers Shown on Color Card

Behr-Manning Corp., Troy, N. Y., has produced handy swatch cards which show actual standard color samples of 24 Regular and ten Tufkote rayon flock fibers. Each color is designated by name and number. Interested flock users may obtain a sample swatch card by writing the company.

C. M. Hall Lamp Co. Sells Its Radiant Heat Division

The C. M. Hall Lamp Co., of Detroit, Mich., a pioneer in the development of electric infra-red heating, has sold its Radiant Heat Division to the Triangle Equipment Co. of Nutley, N. J. This move was necessitated by the expansion of Hall's automotive lighting production.

The nationwide sales organization of the Radiant Heat Division is being taken over by Triangle who contemplates no change in sales or service policies. Mr. C. S. Cogger, Manager, Radiant Heat Division and Mr. F. T. Thayer, Engineer, are leaving the C. M. Hall Lamp Co. to join the Triangle Equipment Co. in its expansion program.

FINISHING FINE Costume Jewelry

By Michael Spirito

Research Chemical Engineer of Coro, Inc., describes step by step methods used in applying all decorative and protective coatings to different types of attractive costume jewelry.

FINISHING for costume jewelry may be divided into two general classifications—decorative and protective. Some pieces require one or more decorative colors followed by a clear protective coating, while others such as chain necklaces and buckles are coated with a clear air-drying lacquer or a clear synthetic finish which is baked.

When work arrives in the finishing room, some pieces have gone through various operations such as stamping, deburring, burnishing, soldering, riveting, polishing and plating. All work is put through a vapor degreaser before it enters the plating room to receive a plated coating of gold, rhodium or silver.

First let us consider a silver pin with a flower design in three colors. These pins are removed from the plating racks and placed on wire

mesh screens. The first organic coating is one of clear urea formaldehyde, 20% solids. In order to properly apply this coating on the pins it is necessary for the operator to spray down from the top and from four sides. Next the wire mesh screens, loaded with decorative pins, are placed on a horizontal bar conveyor which carries them into a convection oven where this clear protective coating is baked for 15 minutes at 320° F. The bake-coated pins remain on the screens to cool for about 30 minutes before any decorative color coats are applied.

Color Coats Sprayed Through Masks

The first color coat is sprayed on through a metal mask. This coat is baked for 15 minutes at 320° F. Then follows the second and third color coats, each one being sprayed through metal masks and baked afterward.

Some pieces require shading which is done by hand with small brushes. The material applied by hand painting may be an air-drying lacquer or enamel, although in some cases it is a baking enamel; it depends upon the particular pieces being decorated. Of course,

Spraying a color coat through a fixed metal mask; this speeds up the operation.

baked enamel gives brighter hues, more depth of color, and better wearing qualities.

Plain plated pieces, which require only a protective coating, receive a spray coat of clear urea formaldehyde finish which is baked for 15 minutes at 320° F. After cooling, these pieces are transferred to the packing room or, in some cases, to final assembly for stone setting, cementing, etc.

Chains Coated by Dip-Whirling

Practically all necklaces and chain, as well as many small parts are finished in a dip-whirl machine. For convenience, let us consider a necklace chain ½-in. wide. This has been cut to length and several chains have been wired together in bundles. They are dipped in an acid solution to brighten the metal, then tumbled in an emulsion with steel shot to burnish the surfaces. They are put through a vapor degreaser before they are delivered to the finishing room.

Bundles of chain are placed in the work basket of a dip-whirl machine until the basket is about one third full. Some of you may wonder why this basket is not made half full, or even filled to capacity with chain. Well, it has been found that the clear lacquer or synthetic enamel is thrown off all of the

Loaded screens coming from convection oven in which finish on jewelry has been baked.

chain more thoroughly, and that production is not retarded as one might think by making the basket only one third full.

Clear lacquer used in the dip-whirl machine is mixed 50% lacquer and 50% thinner. A special formulation of pigmented synthetic enamel is used in centrifugal finishing. For dark colors a mixture of 40% enamel and 60% solvents are used, while on pastel shades the procedure is reversed, using 60% enamel and 40% solvents.

Some Dip-Whirl Finishing Technique

On heavy chain it is advisable to spread the chain (before it is dipped) over the entire bottom surface of the work basket, as better coating will result; also, the weight of the chain will be uniformly distributed over the entire bottom of the basket. If most of the weight were concentrated on one side, the throw-off of excess material would be retarded and the unbalanced weight would cause the dip-whirl machine to vibrate unnecessarily.

Chain to be finished is being placed in the work basket of dip-whirl machine.

Sliding a loaded work basket into dip-whirl machine where the contents will be dipped, then whirled to remove excess material.

The average spinning time clockwise is eight seconds; then counter-clockwise for an equal period of time. Upon completion of dipwhirling, the coated chain is dumped from the work basket onto wire mesh screens, either for air drying or baking in the oven, depending upon whether lacquer or synthetic material is used for the coating.

Very small parts are placed in a chessecloth bag and tied securely;

A better wood finish with

TWO COATS INSTEAD OF THREE!

You cut labor costs . . . save materials. And you get a *better* coating . . . a *salesmaking* finish that brings out the wood grain.

You get all these advantages with the new Monsanto coating that Nelson Page & Son, Inc., uses for desks. With ordinary lacquers, a 25% solids content means three coats: One wood sealer coat, plus two coats of lacquer. With Monsanto's new finish, *33%* solids content means only *two* coats: One wood sealer and only *one* coat of lacquer. And you'll find this new finish is just as durable as it's economical!

For information on this finish . . . or any one of Monsanto's 15,000 formulations . . . just mail the coupon.

Furniture by Nelson Page & Son, Inc. of Mechanic Falls, Me.

MONSANTO
CHEMICALS — PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

MONSANTO CHEMICAL COMPANY, MERRIMAC DIV.
Department IFM2, Boston 49, Mass.

☐ *Please send me information on Monsanto coatings for*

☐ *I am enclosing a letter on my requirements for a coating.*

Name **Title**

Company

Address

City **State**

the bag is put into the work basket, dipped and whirled in the usual manner. In this way the very small parts are not forced out through the wire mesh of the work basket by centrifugal force.

Lacquer-base transluscent colors in blue, green, purple, pink and yellow are applied on silver pieces in the dip-whirl machine, the material being mixed in the proportion of 40% lacquer and 60% thinner. Average spinning time is eight seconds each, clockwise and counter-clockwise.

Each basket load is put on a separate screen to air dry for 15 minutes, another advantage of coating smaller quantities, whether it is chain or other pieces.

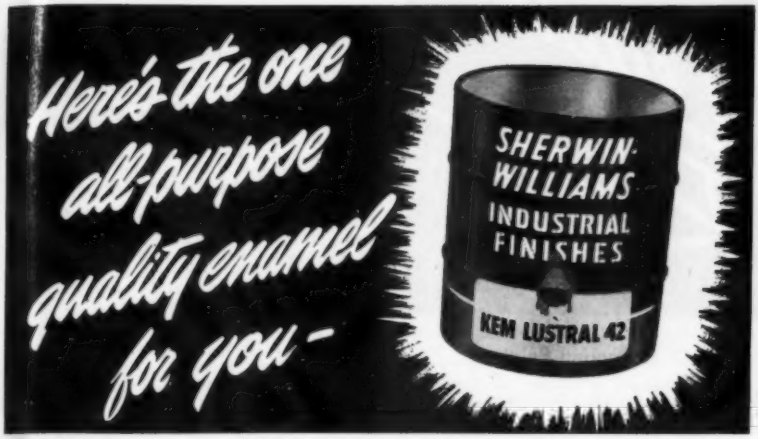
To obtain the desired finish, some pieces require two and sometimes three coats of material. However, it should be remembered that excellence of finish is gained through the application of several thin coats rather than a few heavy coats, whether it be in a spray booth or in a dip-whirl machine.

Here an operator is spraying a clear synthetic protective coating on jewelry before the decorative color coats are put on.

FAST MEN—SLOW MEN. Almost every finishing organization is burdened with at least one slow-poke. No matter what job he is placed on, he simply doesn't get out of low gear. There may be several reasons why such employees cannot be fired; yet, despite all threats and cajoling, their production always remains below standard. They really constitute a serious problem and often threaten the morale of an otherwise sufficient organization.

I have found one method of dealing with this problem which is usually successful. Look for the spots where this man can be teamed with the fastest man in the shop. If he is a helper, let him help the fastest sprayer that you have. If he is a sprayer, let him work side by side with the fastest sprayer, spraying identical work, loading the same truck or conveyor. No matter what the job is, place him where he himself must compare his results—in fact, his every movement with those of the faster man. Few men can resist the challenge of competition.

Where criticism promotes sulking and careless work, and pleading invites contempt, this approach is purely phsycological. Many a drone will discover that work is never drudgery when it involves demonstrating that he can produce with any so-and-so in the place.—GEORGE CONRAD.



KEM LUSTRAL 42

No need to carry a large inventory of finishes—when *one* enamel will do so many jobs so well!

Put Kem Lustral 42 on practically any kind of surface. Use it for product finishing—or for exterior or interior plant maintenance. Apply it by brushing, dipping or spraying. Bake it if you prefer, or simply air dry it. In every case, Kem Lustral 42 levels perfectly, hides beautifully, dries to a tile-like finish.

Pick just the color you want from a line of 21—plus black, gloss white and semi-gloss white. And get the Kem Lustral 42 you want quickly and conveniently—from any one of the 385 Sherwin-Williams branches located in principal cities from coast to coast. The Sherwin-Williams Co., Industrial Division, Cleveland 1, Ohio. (Export Division, Newark, New Jersey.)

Another Product of Sherwin-Williams Industrial Research

Can be Brushed! Dipped! Sprayed!

For Industrial Interior or Exterior Use!

Can be Air-dried or Baked!

21 colors plus Black, Gloss White and Semi-Gloss White!

AVAILABLE AT 385 SHERWIN-WILLIAMS BRANCHES!

SHERWIN-WILLIAMS INDUSTRIAL FINISHES

Reflecting Paint

I believe there is on the market a reflecting paint which will reflect the light when the headlights of a car strike it. If you have any information on same, please let me know.—A. F.

We believe that what you have in mind is a paint containing glass beads or crystals or something of the kind. For further information on this, we refer you to one or more of the following concerns:

The Flex-O-Lite Corp., 3130 Chouteau, St. Louis 3, Mo.; Prismo Safety Corp., Huntington, Penna., and E. C. Ballou Co., 6 Varick St., New York 13, N. Y.

We believe that you can get the information you want by writing one or more of the above named concerns.—ED.

Furniture Finishing Articles

One of your articles appearing in INDUSTRIAL FINISHING, mentioned a publication entitled, "Theory and Practice of Furniture Finishing", by Rollin H. Wampler. Will you please advise where this publication can be secured and the price. —M.D., Q.S., C.G.D., Canal Zone.

A series of articles under this title appeared exclusively in INDUSTRIAL FINISHING Magazine, in the following issues: December 1947, Part I; January 1948, Part II; March 1948, Part III; May 1948, Part IV; and June 1948, Part V. No reprints have been made as yet.—ED.

Retired Finisher Offers Back Issues of I. F.

Please discontinue the magazine. I am retiring from the finishing business. I have received INDUSTRIAL FINISHING for many years, and to me it has been the best magazine for anyone who owns or works in a finishing department. No foreman or finisher should be without it. I can't find words to tell how much I think of the magazine and how much I valued it.

I have saved each and every copy over a period of years. I guess I have about ten years or so. I will be glad to send the lot of them to anyone who will pay for shipping charges.

Yours truly and many thanks for the service rendered through the past years. —Russell Davis, 1517 Lester St., Tuscon, Arizona.

You who want back copies of the magazine to look over what you have missed, or to have them for reference—here is your opportunity.—ED.

Stonhard Resurfacer

Will you please send us further information on Stonhard Resurfacer, as mentioned on page 84, of October issue of INDUSTRIAL FINISHING?—O. T.

We refer you to Stonhard Co., 1306 Spring Garden St., Philadelphia 23, Penna.—ED.

Non-Bake Glaze for Ceramics

We wish to purchase a cold-water paint glaze to be used on ceramics. I would appreciate any information as to where same could be purchased. We formerly used a glaze that had to be heat treated, but our new item cannot be put into a kiln.—H. A. S.

Can some reader tell us who supplies this material—if it is available?—ED.

Automobile Finishes

We would appreciate receiving tear sheets of all article you have recently published on automobile finishes.—Shell Chemical Co.

We assume that you have in mind articles about automobile finishing, therefore we are sending you tear sheets of three or four. We have not published any articles about automobile finishes recently.—ED.

Durable Bake Enamel for Outdoor Use

On page 100 of October 1948 issue there is an inquiry for a bake enamel for coating aluminum sheets to be used in identification signs. Your inquirer asked for an enamel that will retain a bright finish for at least two years, outdoors along the Eastern seaboard.

We believe our "Duranite H" enamel

(Continued on page 89)

will fill his requirements because it is particularly well suited for use on aluminum. It has brilliant luster and has remarkable resistance to humidity, soaps, salt spray, acids, oils and alcohol. An exceptionally fine one coat finish is possible when baked for 30 minutes at 425° F.—Atlas Industrial Finishes.

Nail Hole Putty

In your October issue, in the "Letters from Readers" section, page 98, there is an article entitled, "Putty for Nail Holes". We are interested in obtaining additional information and prices on this item, but the full name and address of the company that manufactures this putty is not included in the article. We would appreciate any information you can give us on this.—C. R. S., New York City.

I would like the name and address of the Plastic Coating Company regarding a plastic putty which was mentioned in your magazine, on page 98 of October 1948 issue.—S. V., Long Island City.

The concern whose published letter you refer to is located in Los Angeles, Calif., 6911 Stanford Ave. In a letter we are submitting names and addresses of other manufacturers of nail hole putty who are located nearer to you.—ED.

About Wood Graining

With reference to page 106, in October 1947 issue (five methods of reproducing wood grain), we wish you would send us information regarding paragraphs three and four (open-stencil process and silk-screen process). We would like to know where materials for both open-stencil and silk-screen processes can be obtained. We would also like to know where we can get rollers and plates for graining. We will appreciate an immediate answer.—C. P. Co.

In a letter we are sending you the names of concerns that supply equipment and materials for wood graining by the various processes you have mentioned. Most of these firms advertise their products in this magazine.—ED.

Masking for Separation of Color on Name Plates

Recently you published an article on masking. It applied to name plates, horn rings, etc. Will you please send me tear sheets on these?—J. J. Co.

Yes, we are pleased to send you tear sheets of the illustrated article, "Spraying Color Through Form-Fitting Masks", which was published in INDUSTRIAL FINISHING Magazine almost two years ago—namely, in January 1947. This article was written by our own Field Editor, Mr. P. C. Bardin, and is based on facts and photographs he obtained during a visit to Conforming Matrix Corp., 331 Toledo Factories Bldg., Toledo 2, Ohio. A full page advertisement of the above named company appears on page 95 of October 1948 issue of INDUSTRIAL FINISHING Magazine.—ED.

Articles About Flock

On page 98 of October issue you refer to tear sheets of past articles on flocking. We would like to have whatever reprints are available.—A. H. Co.

We have published many articles about flock finishing during the past 18 years, but the demand for back copies containing same, and tear sheets of same, has been so great our supply is exhausted.

We suggest that you find some individual or firm or library in your locality that has back copies, and ask to look at the following: For the year 1947, Jan., pages 78-84; Feb., pages 80-88; Mar., pages 41-52; Oct., pages 77-82. For the year 1948, see April, pages 79-84.—ED.

Wood Fillers

I am interested in learning the name of a manufacturer of wood fillers in the New York Metropolitan area.—S. R.

Look over the advertising pages of any issue of this magazine.—ED.

Luminous Paints

In the October issue of INDUSTRIAL FINISHING, on page 100, under the caption, "Luminous Paints", you suggest that the Lumite Division of Chicopee Mfg. Corp., 47 Worth St., New York, N. Y., is a source for luminous paints. The Lumite Division advises us that they do not make luminous paint.

Can you tell us whether or not luminous paint can be purchased in colors? Can it be mixed with lacquers or applied over lacquers? What are several good sources for procuring this type of paint?—R. B. Corp.

In a letter we are naming several concerns who, we understand, offer luminous paints for sale. They will also answer your questions as to colors and mixes.—ED.

Preserves Paint Brushes When Not in Use

A sealed air-tight, all-metal container to suspend paint brushes at the correct depth in individual compartments holding solvent or processing fluid, is announced by Yenne & North Mfg. Co., Wooster, O.

Painting Over Plastic; Bleeding Trouble

We are having difficulty in spraying a melamine formulated synthetic ivory baking enamel over a plastic shade made of phenolic (brown, mottle). Due to the dye used, we get a "bleeding condition" which we have been unable to overcome.

In checking our files, I discovered an article on, "Painting of Formaldehyde Plastics" by John F. Daymude, Ch. E., published in August 1947 issue of INDUSTRIAL FINISHING Magazine. In this article, Mr. Daymude mentioned a primer which would effectively seal off bleeding dyes in bleeder plastics. He advises that he will pass on the information as to the name of the primer and where it can be procured.

Perhaps you are aware of this primer and could forward the information to us. Also, you might possibly arrange to have the primer supplier send me a quart sample with solvent and data as to use.—E.M. Mfg. Co.

In reference to your statement that you are using a melamine synthetic resin over a phenolic (brown and mottle) plastic, and are experiencing a bleeding through the dye, this is a usual condition experienced by those people finishing this type of plastic. The material referred to in the article is "Paladin," as made by [name on request]. It is to be sprayed at about 11 seconds viscosity at 80° F., using a No. 4 Ford cup. Spray on a heavy wet coat and bake for 45 minutes at 260° F., or 25 minutes at 275° F. to 280° F. or 15 minutes at 300° F.

The primer will seal off your bleeding plastic unless there are pin holes in the plastic; that being so, nothing will correct the condition referred to above. I would suggest that you use their [company's name on request] high gloss or semi-gloss primer, rather than their flat or clear primer.

Should there be other questions relative to this subject, please feel free to contact me at any time.—John F. Daymude, Ch. E., Surface Finishing Consultant.

What to Call This "Wiper Coat"

Among other patents I have pending, one is directed to a method in which one of the steps is to produce a high-low configuration on a wood surface, followed by sealing the surface, coating it opaquely, applying another coating such as oil colors in gasoline of a creamy consistency thereon, allowing it to become tacky, and then wiping the unrequired excess from the high areas only.

This, in part, is the process commonly called "antiquing". But that is a misnomer since the same system may be applied, using pale wiper coats, which do not necessarily produce an antique appearance. In England the so-called "wiper coat" (my coinage) is called the "scrummage" coat. I have seen this term used in different British books on the subject of wood finishing, as published many years ago.

Now the American patent office

Everything for the Finishing Room . . .

LACQUERS

SEALERS

STAINS

FILLERS

SYNTHETICS

PRIMERS

WOOD BLEACH

VARNISHES

The Gilbert Spruance Company

RICHMOND AND TIOGA STREETS

PHILADELPHIA 34, PENNA.

examiner objects to the term on the ground that the same word in Webster's dictionary has an entirely different meaning. But while I have personally used the term "scrummage" for years, I have never heard it so used in this country by others; nor have I heard of my other generally accepted domestic term used to define the above named "wiper coat".

As the examiner may require some more descriptive term or combination of words in place of the British expression, I wonder if Mr. Wampler or someone else about your office has heard the word "scrummage" used in American finishing shops; or, if not, what other term is usually employed? I could, to be sure, change "scrummage" to "wiper coat", but the latter, as already explained, is my own improvisation.—O.B. (Fine Art Studios).

The coat you refer to as a "wiper" or "scrummage" coat is usually referred to in the woodworking trade as a "glaze" coat. The process is called "glazing". The material used is called a "glazine stain", and is usually made especially for the purpose.—R. H. WAMPLER.

Clear Hard Finish for Wooden Bowls

We are contemplating setting up an entirely new factory for the manufacture of top quality wooden bowls, plates and trays. The whole line is to be turned, routed and shaped out of solid lumber. In connection with this move, we are now trying to find the most suitable finish.

All of our products are quality products. The finish, therefore, has to be of top quality in every respect and whatever is claimed of it has to stand proof under test.

One of the items will have a function similar to that of a salad bowl when in use. The basic specifications of the finish we are looking for, therefore, should be about as follows:

It must be a clear (water clear) finish. It cannot be affected by vinegars, alcohols, oils, fats, greases, hot or cold water, soap suds, household alkalis, etc. It must be tough, scratch-proof and mar-proof. It must be waterproof and unaffected by immersion in water if the item is sufficiently coated.

We would prefer a system where only one finishing material is used from sealing to finish coat. Some items could be dipped; others would have to be sprayed. We are open to consider cold or hot applications and we favor forced, conveyor-line oven drying. Could you possibly advise us what to use as a finish?—C.W.

The urea-alkyd wood finishes should be everything that you desire. In the first place, they spray cold at around 40% solids. It is quite probable that on hardwood, such as maple or birch, one or the other of which would probably be used in making wooden salad bowls, no filler would be necessary, which means that the same finishing material can be used from the wood up through the final coats.

For the type of service intended, at least two and perhaps three coats would be required. Each coat should be applied and given a bake of about ½-hour at 150° F. Sanding and polishing may be done on the final coat, if desired, after the object has been given a thorough bake to cure completely the combined finishing system. On heavy wooden objects, this might take anywhere from one to two hours at 140° to 150° F.

Such a finish, properly applied and cured, will be highly resistant to water, soap, alcohol, oils, fats, greases and most foods. Materials which contain vegetable colorants, such as mus-

SAND BY AIR

IN STRAIGHT LINES WITH THE SUNDSTRAND OPPOSED PAD SANDER

and Get a Better Job Faster

This is the sander you'll want for production or maintenance work on wood, metal, plastic or composition. It's a sturdy air operated machine—easy to handle because of vibration-free action. You'll effect savings between 50% to 70% on production sanding—wet or dry.

Pads of this outstanding sander reciprocate in a straight line and in opposite directions—grain structure can be followed easily, producing finer final finish. Ask for a demonstration of a Sundstrand in your plant before buying any portable sanding equipment. There's no obligation.

FREE DATA

If your work includes sanding of wood, metal or composition on production or maintenance work, write for free complete bulletins. Ask for bulletin IF-36.

SUNDSTRAND MACHINE TOOL CO.
PNEUMATIC MACHINE DIVISION
ROCKFORD, ILLINOIS, U.S.A.

tard, will stain the film slightly, and many drugs, such as iodine, benzoin, mercurochrome, etc., will do likewise. However, the finish is unaffected by most fruits and vegetables, meats, butter, mayonnaise, catsup, etc.

It is also quite resistant to alcoholic beverages; some softening of the film takes place but if the film is not damaged while it is still soft, no permanent harm results.

The finish is very pale in color and is suitable for use on light-colored or bleached woods. Where it is used as a single finishing system from the wood up, thus eliminating the use of stearated sealers and oil fillers, it yields an extremely hard, tough, adherent and abrasion resistant surface.

These finishes should be baked in ovens having carefully controlled humidity so that the wood is not excessively dehydrated during the bake. Rapid evolution of moisture or air from the pores of the wood sometimes results in excessive pin-holing of the film during the bake. Excessive dehydration frequently results in a subsequent high degree of dimensional change which may accelerate checking of the finish on aging.—C. P. MOORE.

Several of the finish concerns that advertise in this magazine can supply the material you need.—Ed.

For the type of work outlined in your letter, I believe a catalyzed urea finish will give you the best results. This type of finish is the urea-alkyd low-baking finish used on some types of furniture. It can be made practically water-white in color. It comes at 40% to 45% solids, and requires a special reducer.

The catalyst is incorporated in the finish by the manufacturer, or it may come separately. It is ideally adapted to conveyor work, since it will bake hard in about one hour at 140° to 150° F. It has good sealing and building qualities, and excellent resistance to the materials mentioned in your letter.

The urea-alkyd finish can be used throughout, thus giving better toughness and resistance than it otherwise would. For the first coat, reduce the material with half its volume of special reducer. Apply by dipping or spraying and force-dry about 30 to 40 minutes at 140° F. Then scuff-sand. Apply another coat at full body by spraying. Allow the first full-body coat to air-dry about 30 minutes; then apply a second coat. After a 30-minute setting interval, bake for one to two hours at 140° F.

If the wood contains less than 9% of moisture, there is little danger of blistering. If there is some tendency for the coats to blister in the oven reduce the temperature to 120° and bake four hours; or use a zoned oven to bring the temperature up gradually.—R. H. WAMPLER.

Kick-up on Finish of Ribbon Grain Mahogany

We are having trouble with "kick up" on ribbon-grain mahogany. Following the usual procedure of staining, sealing and using an oil-base filler, allowing overnight drying, then flat and gloss lacquer to finish. Our trouble begins after applying lacquer. Can you please help us?—G.

What you call "kick up" on your ribbon-grain mahogany may be due to any one of a hundred or more things. Since your letter is not very explicit, it is difficult if not impossible, to ascribe the trouble to one or more definite factors. The best I can do is to mention a few of the most probable causes.

First of all, it should be realized

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that ribbon grain mahogany has a lot of end grain exposed on the flat surfaces. That is responsible for the characteristic ribbon or stripe. In these areas the ends of the pores are exposed, so that the wood will soak up more stain than it will on other portions of the surface.

If you are using water stain, you are raising the grain more on the end-grain areas. The difference does not show up until after filling and the coat of lacquer sealer or lacquer is applied. You can stop this, of course, by switching to a non-grain-raising stain.

It is possible that the wood is not smooth enough when you stain it. Because of the interlocked grain of mahogany, veneers must be cut with care to avoid tearing up the wood fibers where they are not parallel to the surface. It is almost impossible to sand such veneer smooth enough, so that it will not show up after the wood is finished. Whether the wood is solid or veneered, make sure that it is polished smooth before you stain it. Use No. 5/0 sandpaper for the final cut on the wood.

It should be realized that mahogany is a softer-textured wood than many other hardwoods used in cabinet work. For this reason it should be sanded smooth, filled carefully, and the sealer coat should be sanded very smooth before lacquer is applied. Some experienced finishers glue-size all mahogany before staining, claiming that is the only way they can get a smooth finish. The glue size holds down the wood fibers and reduces the porosity to some extent.

Of course, if the roughness shows up on the first coat of lacquer after all these precautions are taken, about all you can do is wet-sand the first lacquer coat carefully to remove it. Use water for this wet-sanding, and No. 360 sandpaper (wet-or-dry). Then apply the final coat or coats evenly, but do not flood the surface. Apply an even wet coat.

Make sure that the filler is dry before sealing. Sometimes wet filler causes some roughness, especially on ribbon grain mahogany. Overnight drying is adequate for most overnight fillers, but not if the room is cool or damp during the night. A little heat in the room at night, will do wonders for the smoothness of the finish if the filler does not dry well under prevailing conditions. Also, do not flood on the sealer coat, for that has more tendency to kick up the filler. Just apply an even, wet coat, and no more.—R. H. WAMPLER.

Metalwash Machinery Corp. Opens Office in Los Angeles

The Metalwash Machine Corp., Irvington 11, N. J., announces the opening of its new western office located at 1130 W. Olympic Blvd., Los Angeles 15, Calif. Mr. J. Sigmund Berlie will be in charge of this office.

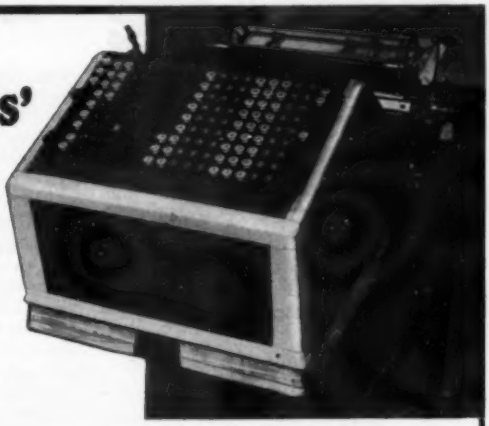
Mr. Berlie has had many years of experience in the metal-working industries, especially in washing and pickling of metal parts, and is available for consultation and information regarding all types of metal washing, pickling, drying, and processing machinery.

New Coatings Developed For Various Products

At the recent 13th Annual Paint Industries Show held in Chicago, Bakelite Corp. displayed prime coated aluminum sheet, a new application development of the vinylite resin-based wash primer. Used on aluminum clapboard siding, this wash primer is said to insure excellent bonding and adhesion to the metal, and improved resistance to corrosion. In addition to use on siding it may be used on sheet stock to be made up into signs, license plates, kitchen cabinets, toys, panels and other products.

Also introduced for the first time are newly developed Bakelite polystyrene emulsions. Coatings made with these emulsions demonstrate exceptional ability to seal out moisture on many types of surfaces including wallboard, concrete, paper, leather, cloth, wood and plaster. Such coatings have excellent hiding power and are non-penetrating on porous surfaces.

Burroughs' Fine Finish Stays Fine



with BAUER & BLACK Tape No. 158

Burroughs Adding Machine Co. takes no chances of marring their top-quality finishes. Strips of tape No. 158 protect edges and corners of machines during assembly and storage.

Bauer & Black's No. 158 is a *quality* tape, made for application to fine finishes you're proud of. It holds and protects parts, *then pulls off clean.* No adhesive residue is left.

Manufacturers and shippers of many enameled goods can get the *protection* they need with non-staining tape No. 158.

For further information or for FREE test samples, write Dept. 6-11, 2500 S. Dearborn St., Chicago 16. No obligation.

**Photo courtesy of the Burroughs Adding Machine Company, Detroit, Mich.*

A product of

BAUER & BLACK

Division of The Kendall Company, 2500 S. Dearborn St., Chicago 16

Industrial Adhesive Tape

PRESSURE SENSITIVE

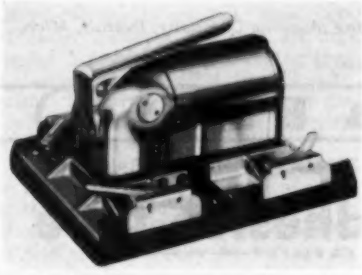
Production Short Cuts to Reduce Costs • Research to Speed and Improve Methods

Materials Supplies Equipment

Air-Driven Portable Sander

The New National Model 300 Air Sander is a powerful 2-pad tool with a straight-line, reciprocating action. It is made of strong light-weight materials, and is usually powerful and sturdy. It weighs only 5-lbs.

With the reciprocating action, vibration is practically eliminated; operators find the tool exceptionally easy to use. Each of the two pads operates at 2000 strokes per minute. Pads are avaiable for different kinds of surfaces and with abrasive areas of different measurements. It is efficient for wet sanding . . . a product of National Air Sander, Inc., Rockford, Ill.



Straight-line reciprocating action.

Improved Dynaprecipitor Spray Booth

In the new Binks Dynaprecipitor booth, overspray and fumes are whisked off through a solid, unbroken curtain of water and treated to five thorough scrubbings. This removes and collects all paint solids and pigment for disposal or reclamation. No paint particles ever reach the exhaust stack to collect on fan blades and throw them out of balance, or to form unsightly accumulations on surrounding property. Because of the thorough washing of the fumes and their dilution with large volumes of air, atmospheric pollution is reduced to a minimum.

There are no nozzles or dead ends to clog or accumulate deposits, so there is always a continuous, unbroken water curtain of high gallonage per lineal foot. Because the water is constantly re-circulated by centri-

Assures a clean atmosphere, and practically eliminates the hazards of fire or explosion.

Mark this on your slate as a "must" for 1949!

increase +++ mechanical handling efficiency!

Break-even point rising? . . . Present volume cannot hold up indefinitely. Once sales begin to taper off, can you keep out of the red?

Prepare now for such a contingency . . . raise the efficiency of mechanical methods in your plant.

Prevent back-tracking by arranging your production equipment in logical sequence. Keep your product moving through the various manufacturing, finishing and crating operations . . . progressively, continuously and economically on P-B Conveyors. Result: Costs go down; Production steps up; Fewer rejects with higher quality products.

Call in a P-B engineer and ask him to help you solve that rising "break-even point" problem.

PALMER-BEE COMPANY
DETROIT 12, MICHIGAN

fugal pumps of ample capacity, Dynaprecipitor units are economical, as only enough water is added from time to time to make up for small evaporation losses.

Exhaust air, free from all traces of paint, passes through moisture eliminator plates before it reaches the exhaust stack. This removes practically all moisture from the washed air.

Binks Dynaprecipitor water wash spray units are made in a large number of stock sizes for ready erection. To meet requirements of certain heavy industries, where exceptionally large or special booths are needed, special Dynaprecipitor installations are engineered. For the automobile and other heavy industries, where finishing is done simultaneously from both sides of the work, Dynaprecipitor water wash installations are equipped with downdraft or tunnel exhaust.

Complete information and engineering data concerning Dynaprecipitor units of this type are contained in Bulletin No. 500 just issued by the Binks Mfg. Co., 3114 Carroll Ave., Chicago 12, Ill.

To Clean Dirty Hands

The Magnus Chemical Co., of Garwood, N. J., manufacturer of industrial cleaning materials and machines, now offers its powdered hand cleaner in attractive, handy 5-lb. containers for easy dispensing.

The new package is designed for industrial plants and others having powdered hand cleaner dispensing units in their washrooms. The dispensers can be refilled direct from the new package.

Magnus Hand Cleaner has been used in garages and industrial plants for nearly 28 years. It provides a safe, quick and economical method of removing grease, paint, pitch, ink and all other hard-to-remove dirts and stains from the hands. The soap used in it is equal in quality to the finest grade home toilet soap. The only scouring agent used is a very high grade of pure pumice containing no hard quartz crystals or sharp jagged edges to abrade the skin. All particles are soft and porous enough to wear or break down during normal rubbing without scratching the skin. It cleans equally as well with hot or cold water. Each pound provides 175 men with two washes daily.

Makes the Paint Can a Pressure Container

Silver King Corp., 622 Diversey Parkway, Chicago 14, Ill., announces an adapter that permits paints, lacquers, etc., to be sprayed directly from a 5-gallon container, which then

The paint container adapter in use

There are advantages in Vin-O-Cel for the finishing of pianos and other high grade furniture far beyond its ability to accentuate the rich grain in fine woods. Vin-O-Cel has *plus values over conventional finishes, such as greater durability and extra resistance to cold checking.* There is very little shrinking on drying.

Vin-O-Cel is proof to water, greases, alcohols, mild acids and alkalies. Vin-O-Cel flows beautifully — is dust free in 10 minutes and may be recoated in 4 hours.

Vin-O-Cel is available in clear and pigmented forms, in any degree of sheen or gloss. Write or wire for complete facts and your sample panel.

Manufacturers of
Enamels and Lacquers for over 50 years.

SYN-POR DURO FINISH

MILWAUKEE 7, WIS.

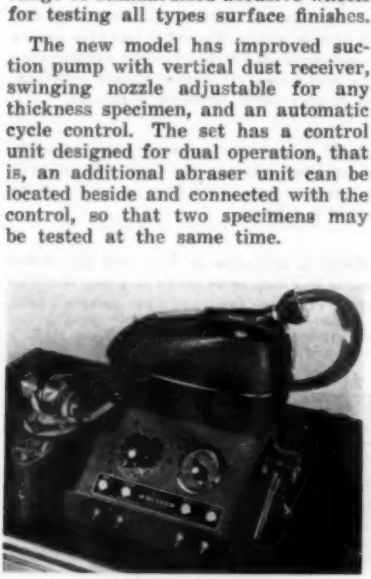
serves as a (low) pressure container. Top and bottom plates are made of cast aluminum. The paint can is clamped between these plates with three hinged rods to which are attached thumb nuts.

Parts included on the top plate are a brass regulator valve, standard dial guage, automatic safety valve, and brass air fittings. A heavy Neoprene paint-resistant gasket prevents paint from escaping around the top edges of the container while the adapter is in use.

New Abrasion Testing Set

Taber Instrument Corp., 108 Goundry St., North Tonawanda N. Y., announces a new abrasion testing set Model No. 100-109, equipped with a range of standardized abrasive wheels for testing all types surface finishes.

The new model has improved suction pump with vertical dust receiver, swinging nozzle adjustable for any thickness specimen, and an automatic cycle control. The set has a control unit designed for dual operation, that is, an additional abraser unit can be located beside and connected with the control, so that two specimens may be tested at the same time.



Taber abraser standard testing set.

New Line of Black Arrow Air Compressors

The Black Mfg. Co., Baltimore, Md., makers of Black Arrow Paint Spray equipment, announces the addition of a complete line of air compressors. The first two units of the line already being shipped are both portable compressors. One is for use with motors ranging from 1/3 to ½-hp. The other is for use with motors ranging from ½ to 1½-hp. Other models will be ready for shipment shortly.

Easy to move anywhere . . . quickly.

"Oncrete" Traffic Paint

A new special type quick-drying, long-wearing "Oncrete for Concrete Traffic Paint" developed particularly for marking factory aisle border lines, pull-out and storage areas, danger zones around unguarded docks and pits and warning symbols at blind corners, crossovers, sharp intersections and entrances to passageways, is announced by Lowebco, Inc., 1525 E. 53rd St., Chicago 15, Ill.

This new paint dries in approximatey five minutes at 75° F. or over. It can be easily sprayed on with marking equipment. It is immediately available in Federal Yellow, Traffic White and Traffic Black. Other colors can be developed on request.

MAR-PROOF LACQUER

SCHAEFER'S Mar-Proof Lacquer is a performance-proven finish that cannot be easily marred or scratched.

It's tough—tougher than the ordinary lacquers; meets the most critical requirements of current production.

Made in either clear gloss rubbing or satin finish, it produces a splendid transparent coating of full depth on maple, walnut, gum, mahogany and other cabinet woods.

Economical; gives plenty of coverage and dries quickly. Our Mar-Proof Lacquer Sealer is recommended with it for a first-coater.

Working samples furnished without obligation. Write for them!

THE SCHAEFER VARNISH COMPANY, INC.
Louisville, Kentucky

Tacky-Cloth in Rolls

Tacky-Cloth in 150 and 250-yard rolls, is announced by Geo. E. Watson Co., 164 W. Lake St., Chicago, Ill. Having the cloth in rolls provides a convenient method for handling the material in finishing rooms where tack rags are used for removing dust and lint before a coat of finish is applied.

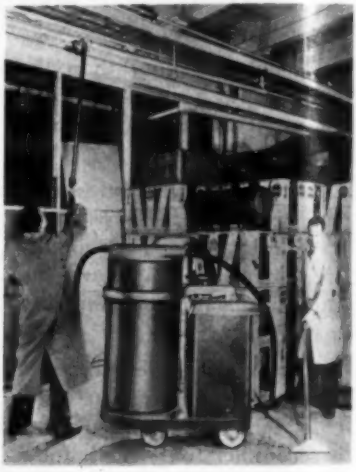
Made of the same materials as regular tack rags, Tacky-Cloth in rolls, consists of 36-in. wide impregnated cloth, folded down to a 4-ply, 9-in. width and rolled onto a 1½-in. cardboard core. The roll may be attached to any convenient surface, unreeled and snipped off as desired. Any size piece may be cut according to requirements.

Tacky-Cloth is proof against spontaneous combustion. Each roll is wrapped in grease-proof paper and shipped in individual cartons. This shipping carton may be used as a protective hood, as shown in the accompanying picture. However, Tacky-Cloth will not dry out when exposed to air, even for long periods of time.

Cut pieces off as needed, from roll.

Industrial Vacuum Cleaners

Big in capacity and performance, and with exceptionally powerful suction, these new Tornado heavy-duty vacuum cleaners, are built in four sizes, powered by 2, 3, 5, and 7½-h.p. motors.



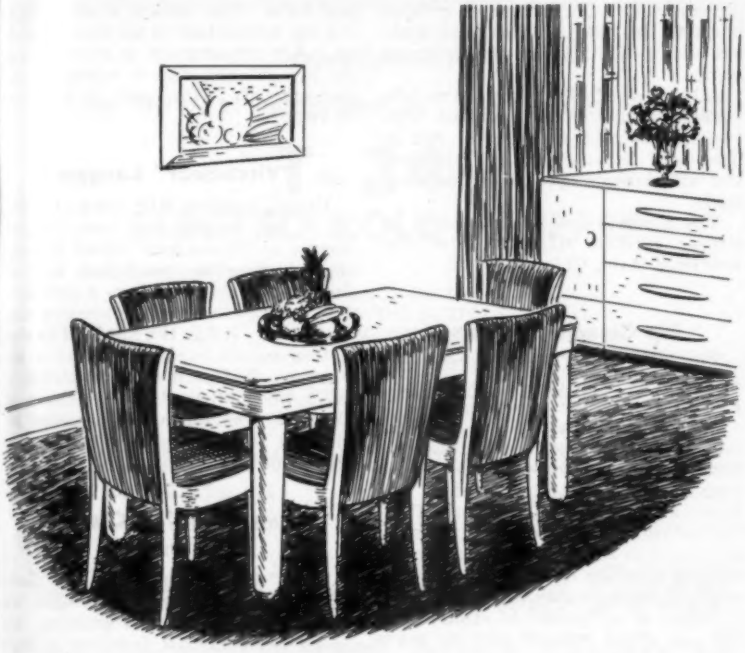
Efficient for either suction or blowing.

Many special features have been incorporated into these new cleaners to make them proficient for all types of industrial use, regardless of individual conditions, with a minimum expenditure of time and labor.

A new Breuer patented principle allows the unit to be changed instantly from suction to blowing by the movement of a lever.

Another feature is the ability to

Good taste is essential to gracious living . . .



. . . and fine finishes are essential to good taste

To create products of good taste at a profit, the manufacturer must never be satisfied with things as they are. He must continually seek new ways to raise quality and lower costs.

For years, Stille-Young has been helping manufacturers improve their industrial finishing materials and methods.

Stille-Young supplies a wide variety of standard, pre-tested lacquers, sealers, fillers, stains and enamels . . . and formulates special materials tailored to fit individual requirements.

STILLE-YOUNG
CHICAGO 14

STILLE-YOUNG

Manufacturers:
LACQUERS, FILLERS
STAINS
ENAMELS AND PAINTS

pick up wet or dry substances without harm to the filter or tank, and without any special attachments or equipment.

All sizes of Tornado heavy-duty vacuum cleaners are equipped with two intakes and one or both can be used with either 1½-in. or 2-in. hose and attachments operating simultaneously.

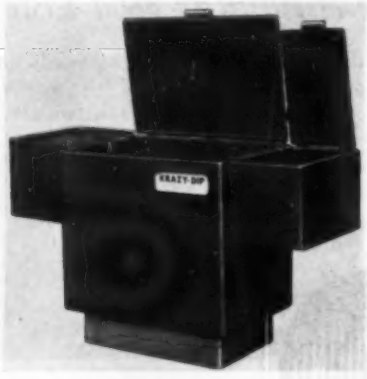
The cleaners are manufactured by Breuer Electric Mfg. Co., 5100 Ravenswood Ave., Chicago 40, Ill.

Dip Cleaning Machine

The Magnus Krazy dip cleaning machine is announced by Magnus Chemical Co., Inc., Garwood, N. J.

Mechanical agitation, the fastest and most thorough batch cleaning technique yet developed, moves the parts in the cleaning solution 160 times a minute. The turbently flowing solution is forced in all crevices and hard-to-reach areas. Carbonized oil and dirt are quickly removed and washed to the outside of the parts.

There is no pump, no electric motor, no speed reducer and no gears and belts. Fire hazard is eliminated. An air compressor is all that is needed. Air consumption is one to 2-cu. ft. per minute, and a minimum air pressure of 50-lbs. p.s.i. is all that is required.



Cold dip cleaning; air agitation.

"Viscoclear" Lacquer

United Lacquer Mfg. Corp., Linden, N. J., has developed a clear lacquer known as "Viscoclear" which is made in a high gloss, semi-gloss and off flat sheen. Viscoclear has a solid content which closely approximates that of varnish. It has the merit of having a tremendous rapid build and a low viscosity that permits the material to be applied without the addition of thinner. The finish has unusual resistance to cold checking and is mar resistant.

New Emulsion Cleaner By DuBois

"Mul" is the name of a new cleaning material which resists hard water, minimizes curd formation and is inhibited against foaming in high-pressure washers. It is a product of The DuBois Co., Cincinnati 3, Ohio.

This cleaner has rust-inhibiting properties because it depends upon inherent corrosion inhibitors rather than surface filming. It is non-corrosive and non-toxic; it has a high flash point and gives off no objectionable odors.

Automatic Dipping Machine

A new automatic dipping and agitating machine is announced by the Wiesner-Rapp Co., 1600 Seneca St., Buffalo 10, N. Y.

By placing the load in the container or holder and pushing the "start" button, the load is automatically conveyed to the first tank, dipped

Announcing

The Newest Member of a Famous Family

T-349

ELECTRO COLD STRIPPER

- **FOR APPLICATION BY BRUSH**
- **REMOVES MOST FINISHES QUICKLY**
- **C-L-I-N-G-S TO THE SURFACE**
- **NO DAMAGE TO METAL OR WOOD**
- **NON-INFLAMMABLE; NON-INJURIOUS**

Write for Free Sample and Quotations
—or Order 5 Gallons at Drum Price

ALLIED FINISHING SPECIALTIES CO.

2461 WEST GRAND AVE. **CHICAGO 12**

A Young and Bertke OVEN

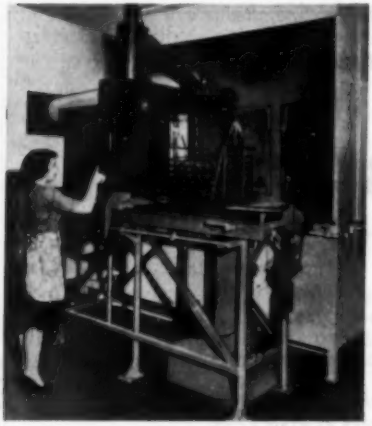
IS THE ANSWER TO YOUR OVEN PROBLEMS

From a small laboratory testing oven to a large production conveyor-type oven, you are sure of efficient operation at low operating cost when you install a Young & Bertke Oven. Write us; we can design and build the oven which will exactly fulfill your individual requirements.

The YOUNG Y&B BERTKE Co.

OVENS - SPRAY BOOTHS - FUME REMOVAL SYSTEMS

1126 HULBERT AVE. CINCINNATI 14, OHIO



Dips racks or baskets of products automatically, semi-automatically or manually.

and agitated for a predetermined time interval. This interval is quickly and easily changed for various operations. Then the loaded container or holder is automatically lifted and moved to the second tank and again dipped and agitated for a predetermined time interval. The machine then either returns the load to the first tank or moves it to a third one if the process requires more than two tanks.

This dipping machine may be operated automatically, semi-automatically or manually for continuous production or, to permit inspection of the load if necessary, during each of the operations. An "emergency" button is provided so that the machine may be stopped instantly at any time during any cycle. To resume the cycle, just press the "start" button.

Simplicity of operation permits inexperienced operators to be placed in charge without reducing productive efficiency. The simplicity also assures trouble-free operation of machine.

Electric Paint Mixer For Small Batches

Red Devil No. 31 Junior Paint Mixer, designed for blending pigments, mixing small batches and samples, is announced by Red Devil Tools, 130 Coit St., Irvington 11, N.J.

Mixing parts are removable for cleaning.

This electric paint paddle is driven by a fractional horsepower motor on 110-volt AC. The mixing parts are demountable; the upper blade on the shaft is adjustable; and a splash plate keeps material in the can while the mixer is in use.

Device to Measure Gloss and Reflectance

A new 60° Glossmeter and a 45° to 0° Reflectometer, both portable, are announced by Henry A. Gardner Laboratory, Inc., 4723 Elm, Bethesda, Md.

Being portable, they may be used outside the laboratory for test-fence measurements, for surveys to show need for repainting, for studies of

☛ Salesmen looking for a change for the better, see page 136

Ablon

WHO'S INDEPENDENT?

In an industrial society like ours, everyone leans on someone. For instance:

Whether or not you ever think about it, you lean on your company's salesmen. Without their production of orders, there would not be much finishing business for you to worry about.

Remember, these salesmen lean on you, too. Now, with tougher competition, they have to fight harder for business. And really top-flight finishes help them clinch the sales that keep your department humming.

So, for a Happy New Year for all of us—why don't you and your salesmen lean on us?

Let the finest in short-bake *Ablonite Synthetics*, backed by an expanding technical staff—and a lifetime of industrial "know-how" provide you with something solid to lean on.

ABLON
Finishes Incorporated

EXCELLENT SYNTHETIC and WOOD FINISHES

84 Waydell Street • Newark 5, New Jersey

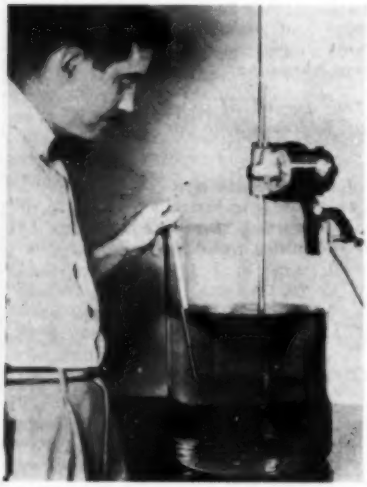
lighting and reading conditions in offices, and for critical areas in the plant such as close-up operations or inspection.

These instruments are designed to operate on either 110-volt AC or battery in a carrying case, or dual unit for operation from either type power. Both instruments are accurate to within about 2%.

Small Portable Stirrer

Eastern Industries of 296 Elm St., New Haven 6, Conn., announces the production of a new stirrer powered by a General Electric universal open frame motor rated at 1/15-hp. for continuous duty A.C. or D.C., 110-volts only. The motor is geared to produce a maximum countershaft speed of 840-rpm. The speed control — a permanently-installed rheostat type—permits variable speeds of 80 to 840-rpm.

The standard Eastern Model No. 8 stirrer is available with a screw clamp or ringstand handle mounting. It is supplied with a rubber covered cord, with a feed-through switch.



For stirring or mixing materials.

New Durable Traffic Paint

Hercules Powder Co., Wilmington, Del., announces a new traffic paint which combines Pentalyn 8[illegible]-A, a synthetic resin, and Parlon chlorinated rubber to provide durability and fast drying.

Test cross lines laid down on a busy intersection show little wear after two years. Drying speed is 15 to 20 minutes, depending upon thickness of film and type of solvent.

This material should prove valuable for marking off aisles in the factory and for plant parking lots.

Several New Metal Cleaners

The Hanson-VanWinkle-Munning Co., Matawan, N. J., has developed a new group of modern efficient metal cleaners. In addition to the Matawan 45 and 65 series announced seven months ago, the company now offers six new Matawan numbers, each selected to meet a demand not fully satisfied before.

In addition to the complete line of alkali cleaners, H-VW-M now has available a good line of solvent emulsion type materials, which are offered for specific problems.

"Liquid Stainless Steel" Applied Like Paint

With a new product called "Liquid Stainless Steel" developed by the Plastics Division of The Lockrey Co., College Point, N. Y., it is now possible for anyone to apply a coating of pure stainless steel to any surface by brushing or spraying, in much the

SUNBRITE

To our many friends in the industrial finishing industry, we extend best wishes for a Happy Christmas and a SUNBRITE New Year.

SUNBRITE MFG. COMPANY

(Formerly the Mitchell-Mayer Co.)

3506 Market St. St. Louis 3, Mo.

£

May 1949 be your happiest and most prosperous New Year and one of STERLING quality.

3508 Market St. **STERLING LACQUER MFG. CO.** St. Louis 3, Mo.

same manner as a coat of paint would be applied.

By a new process, stainless steel is broken down into flakes of microscopic size, so fine that it "flows" almost like a liquid, and this material is incorporated in a liquid plastic and solvent to bring it to brushing consistency.

"Liquid Stainless Steel" exhibits good adhesion to both wood and metal, as well as to other finishes, and is quick-drying.

Blast Gun Sprays Abrasive or Cleaning Solvent

"Tornado," a combination blast gun, manufactured by Engineered Products Inc., 1224 Speer Blvd., Denver, Colo., is a versatile adaption of sandblasting and solvent spraying.

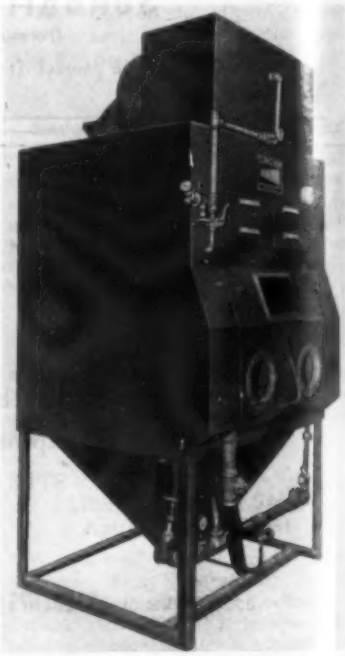
Sprays abrasives or cleaning solvent.

The Tornado Blast Gun can be connected to any air line and is equipped for sandblast operations or spraying solvents and liquids. The nozzle is easily changed by loosening a retaining nut and slipping another nozzle in place.

The gun balances perfectly in the hand, is light to handle and easy to use. Two attachments are supplied with the Tornado gun; an "abrading" case-hardened nozzle for use in blast operations and a "Solvent" nozzle for use with oils or chemicals. The gun is equipped with a 3-pint container designed for quick, sure locking with a quarter turn.

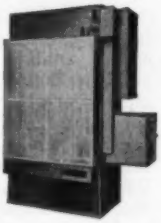
"Jet Blast" Metal Cleaning and Finishing Machine

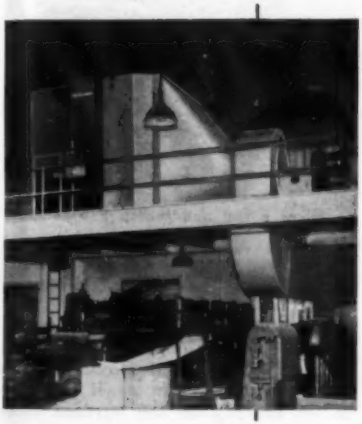
Armstrong Chemical and Machine Co., Painesville, Ohio, announce the new "Jet Blast" machine for wet abrasive blast cleaning and finishing of metal surfaces. The "Jet Blast"



"Jet Blast" metal cleaning machine has capacity to operate with 1 to 8 blast nozzles.

SUPER-CLEAN AIR solves electronic detearing problem





INSTALLATION of an electronic detearing unit in the cabinet finishing room of this refrigerator manufacturer solved one problem but created another. The unit eliminated teardrops of paint but every cabinet upon being subjected to the electrostatic charge became the equivalent of a collector plate. Dust and soot in the surrounding air gravitated to the gleaming white surface like homing pigeons. Result—more rejects due to dirt-specked finish.

And once again super-clean air saved the day. With the installation of AAF Electro-Matic* Precipitators, all make-up air entering this department is free of damaging dust, soot and smoke and the detearing unit is performing its invaluable service.

Super-clean air is returning big savings on scores of industrial finishing operations. For information on the one and only complete line of air filters, contact your local AAF representative or write direct to—

AMERICAN AIR FILTER COMPANY, INC.
210 Central Ave., Louisville 8, Ky.
In Canada: Darling Bros., Ltd., Montreal, P. Q.

**Automatic Electronic Precipitator.*

AAF

AIR FILTERS
AND ELECTRONIC PRECIPITATORS

method removes rust, scale and undesirable metal particles, such as feather edges on sharpened tools, by projecting a slurry of fine abrasive suspended in water against the surface to be cleaned.

The method produces a matte finish with practically no removal of metal. Cabinet and frame are watertight welded steel construction. The siphon jet principle is used for transferring the grit slurry, thus eliminating any pumps or moving parts coming into contact with the abrasive liquid. The only wearing parts are the blast nozzles. Each machine is a self-contained unit, completely fitted for connection to the shop compressed air lines.

Cleans Hands Quickly

A new waterless cleaner which removes grease, dirt and grime from hands in one application is now being manufactured by Schaffner Industries, Inc., Pittsburgh 2, Penna.

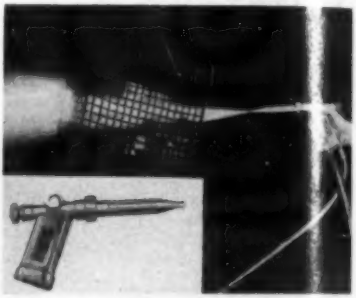
The new waterless cleaner, called "Little Doc" Disolvit, cleans hands thoroughly and quickly, yet gently and softly. It removes grease, dirt, paint, rubber cement, lipstick, tar, asphalt, shellac, carbon, tinners dope, buffing compound and all similar substances without irritating the skin.

One of the essential ingredients of Disolvit is lanolin the soothing substance which protects the most sensitive skins. In addition Disolvit is entirely free from skin-drying ammonia. This provides Disolvit with double protection against irritating or chapping hands.

Disolvit cleans hands simply by being rubbed on and wiped off. Approximately one teaspoonful is sufficient. After it has been thoroughly rubbed in by hand motion Disolvit is wiped off with a dry cloth and hands are free of dirt.

Portable Steam Jet Cleaner

A portable, all electric, industrial steam cleaner is announced by Livingstone Engineering Co., 100 Grove St., Worcester 5, Mass. It is called the Speedylectric Steam-Jet Cleaner and is easy to operate, completely safe and thoroughly effective.



Gives a fast and thorough wash-off.

The new portable cleaner operates silently and efficiently, delivering steam to the cleaning nozzle where, under fingertip control of the operator, a soap solution, solvent or detergent is added and atomized with the high pressure steam as it impinges at jet velocity on the surface to be cleaned. This new unit features a pressure tank which assures a positive flow of detergent or solvent to the nozzle, at desired rates and pressures.

Air Compressors

An air compressor that can "grow" to meet expanding requirements for air is announced by Air-Flo Compressor Co., Akron 7, Ohio.

The new basic compressor, on which patent applications are pending, uses 18 principal parts to construct a line of 48 different models of 1, 2, 3, or

NEW PERIOD
Production Finishes

BAKING ENAMELS · LACQUERS SHELLAC · ENAMELS FILLERS · SEALERS SUPPLIES · PRIMERS STAINS · SYNTHETICS VARNISHES

SEASON'S GREETINGS

As this is written we are approaching the holiday season and again the festive spirit is with us.

All of us here join with your many friends to wish you a Merry Christmas and Happy New Year.

May the new year be one of achievement and may peace and happiness be restored throughout the world.

NEW PERIOD *Production Finishes*

ESTABLISHED 1917

NEW YORK WOODFINISHERS' *Supply Co.*

109 IMLAY STREET BROOKLYN, N. Y.

Motor-driven compressor and tank.

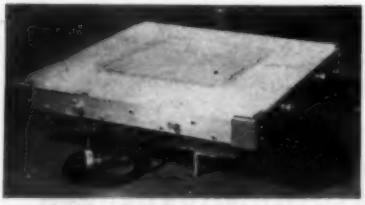
6 cylinder pumps in single or two stage types.

Air-Flo Compressors are available in sizes from ½ to 40-hp. with 2.5 to 275-c.f.m. capacity at 30 to 300-lbs. pressure in vertical, V-type or side angle construction, with single, twin, or radial staggered cylinder arrangements.

Fiber Glass Super-Heaters For Industrial Processes

Making use of radiant heat, Industrial Heat Corp., Gladstone, N. J., has developed fibre glass heating panels capable of temperatures up to 700° F. Panels may be attached to present equipment, used vertically or horizontally, either face up or face down, using radiant, conducted or convected heat. Curved units are available for special requirements. Heating panels with built-in blower units may be had where circulation of air is needed.

Fibre glass super heaters are marketed by Sill Paper Co., Inc. 51 Madison Ave., New York 10, N. Y. A letter will bring technical information.



Fiber glass super-heater panel capable of delivering temperatures up to 700° F.; may be installed vertically or horizontally.

Plastic Decal Designed For Special Applications

The Christman Engraving Co., Battle Creek, Mich., announces a new plastic decal for use on plastic surfaces, sheetings, baked synthetic enamel, wrinkle finishes, leatherette, leather and synthetic fabrics.

This plastic decal sets up an ample bond within a few hours, and the bond improves with age. It is also adapted for use on etched and polished aluminum, stainless steel, chrome and nickel plated surfaces. The decal is applied by the familiar water method, without the use of special solvents or cements.

Harvel Black Paint

Irvington Varnish & Insulator Co., Irvington 11, N. J., announces that its Harvel 1-F black paint is now available for commercial and industrial finishing operations. The paint, a product of Harvel research, is available in either air-drying or baking formulations. It produces a finish which has exceptional resistance to acids, alkalies, oils and solvents, and it may be applied to wood, asbestos board, fiber board and synthetic stone.

FASTER FINISHING AT LESS COST

PUMP AND SPRAY FROM THE ORIGINAL CONTAINERS

1. Air-operated *Versatal* Pumps dispense materials directly from original drums . . . serve up to 6 spray heads.

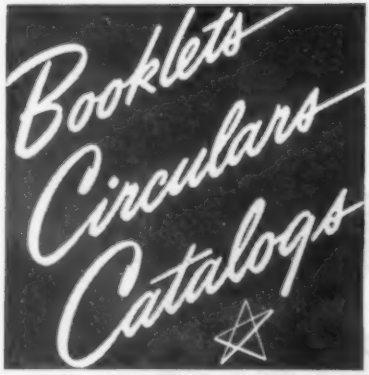
2. Hydraulic pressures deliver materials through as much as 1000 feet of hose.

3. *Versatal* eliminates "time-out" for material handling and transferring . . . increases output per man hour.

For complete details write Alemite, 1814 Diversey Pkwy., Chicago 14, Ill.

ALEMITE *Versatal*

Another Product of Stewart-Warner



Measures the Appearance of Your Product

An 8-page bulletin, published by Henry Gardner Laboratory, Inc., Bethesda 14, Md., describes four new types of instruments for measuring appearance and other optical factors.

A portable reflectometer, multi-purpose reflectometer, photometric unit for measuring gloss, and a color and color difference meter are illustrated and described.

New Color Booklet Free

Devoe & Raynolds Co., Inc., 44th St. & First Ave., New York 17, N. Y., offers a full-color 24-page booklet containing ideas and suggestions for the use of color in effective, inexpensive interior decoration. Entitled "Choose Your Color" and prepared by a leading authority, the booklet is a striking presentation of how painted color alone can bring welcome change to a home interior without the need for refurnishing or remodeling.

Water Curtain Spray Booth Maintenance Bulletin

The DuBois Co. announces the release of its booklet, "Process Specification No. 108", detailing a standard procedure for the complete maintenance and operation of water-curtain spray booths.

Based on experience in many plants, this specification condenses into two short pages the most successful features of all procedures studied. It incudes charging the booth and keeping the water solution up to strength, periodical booth purging, masking dry areas, and collecting sludge for reclamation.

This valuable booklet can be obtained by writing the Industrial Division of The DuBois Co., Cincinnati 3, Ohio.

Industrial Safety Plan

"Packaged Safety" in the form of a complete accident prevention program is being offered American industry without charge via industrial safety directors, plant superintendents and production executives interested in cutting down the appalling accident toll.

The safety "package", known as the Green-Lite Safety Award Plan, consists of everything required for a concentrated anti-accident campaign covering a period of 90 working days. The plan is flexible and may be operated for a shorter period of time if desired.

Copies of the plan may be obtained from its sponsor, Green Sales Co., Inc., 276 Fifth Ave., New York 1, N. Y., to whom requests should be addressed.

Mahogany Book, 7th Edition Now Ready

Announcement is made that the 7th edition of The Mahogany Book, published by the Mahogany Association, Inc., is now available. It contains practical and authentic information about mahogany and its uses as a fine cabinet and furniture wood.

Added features include the official rules for designation of furniture woods, as established by the Federal Trade Commission. They serve as a guide to properly describe wood furniture.

Another useful new chapter deals with mahogany substitutes. This is particularly useful because many new tropical woods are being imported, and some of them have been improperly called "mahogany".

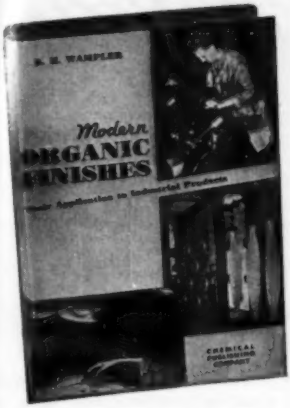
This 80-page 7x10-in. book is available through The Mahogany Association, Inc., 75 E. Wacker Drive, Chicago, Ill.

Metal-Treatment Before Painting

The American Chemical Paint Co., Ambler, Penna., has just published a set of the seven ACP folders on metal preservation and paint durability on metal. They include: "Alodine" (Protects aluminum, anchors the finish); "Deoxidine" (Destroys rusters, bonds paint to metal, removes rust); "Duridine" (The modern metal cleaner and conditioner); Cold Spray "Granodizing" (The protective zinc phosphate coating process for steel); "Lithoform" (Maks paints stick to galvanized iron); "Rodine" (Efficient and economical pickling with "Rodine"); "Thermoil - Granodine" (For protection against rust and wear).

Each folder describes a specific metal-treating chemical; does it briefly and thoroughly. Illustrations help the reader visualize various phases of the product and process involved. They are brand new—just off the press—and they contain a lot of helpful information.

MODERN ORGANIC FINISHES



Their application to Industrial Products

This book is brand new and contains 452 pages of the latest information on finishing. It describes modern finishing materials and equipment for their application, drying, conveying, etc., so that the reader may have an overall picture of modern industrial applications. Throughout, the main emphasis is on proper selection and use of materials to get the best possible finish at minimum cost.

Contents

MATERIALS: Oleoresinous and Alkyd Varnishes and Enamels; Cellulose Lacquers; Spirit Varnishes, High Integrity and Specialty Finishes; Stains, Wood and Metal Fillers, and Miscellaneous Finishing Materials.

MODERN APPLICATION METHODS:
Spray Painting; Dipping and Flocoating; Roller and Knife Coating; Tumble and Centrifugal Finishing; Special Processes.

DRYING METHODS:
The Drying Process—Air Drying; Force Drying; Baking by Convection and Radiant Heat; High-Frequency Baking.

PRODUCT HANDLING IN THE FINISHING DEPARTMENT:
Conveying Methods.

FINISHING PROCESSES:
Wooden Furniture and Cabinet Finishing; Prefinishing Wood, Plywood and Hardboard Structural Materials; Special Industrial Wood Finishing Problems; Finishing Paper, Cardboard and Fabrics; Finishing Plastics and Resin-Impregnated Wood; Cleaning and Surface-Treating Metals; Finishing Automotive and Railway Equipment; Finishing Sheet Steel Products; Finishing Iron Castings; Finishing Aircraft; Rubbing and Polishing Organic Finishes.

SOME GENERAL CONSIDERATIONS:
Good Practice in the Finishing Department; Testing and Evaluating Finishes.

The price is $8.50 and to eliminate bookkeeping we ask that cash accompany order. Sold on a money-back guarantee. Money refunded promptly and without any questions if you are not satisfied.

INDUSTRIAL FINISHING Magazine

1142 North Meridian Street **Indianapolis 4, Ind.**

Industrial FINISHING Editorial

Handling and Moving Materials and Supplies

This slogan, motto, or whatever you choose to call it, should be hung in a prominent place in every industrial plant: *Every time you pick it up and lay it down, it costs money.* Next to good management, economical materials handling is the greatest force that contributes to higher production at lower cost.

Regardless of what the product is, or the physical layout of the plant, there is seldom if ever any reason for piling material on the floor. There is a truck made for every purpose, from drum or barrel trucks and one-man hand trucks, to either platform or fork lift trucks. Besides these there are wood and metal pallets and lift truck platforms for storing and moving raw material and work in process.

There are many types of conveyors, power and manually operated. In fact, there is available a conveyor of some kind, somewhere, for moving any product at any desired speed, any place. A conveyor—even one manually operated—suggests motion. There are several different types which are adaptable to various products and requirements in finishing rooms.

Management should make a careful and thorough survey to determine how materials, supplies and products-in-process are being handled. Size of the operation makes no difference. There is always a better way of doing the job. The task is to find that way. The reward is more production at less cost.

Use Solvents Wisely And Sparingly

★ Solvents are primarily used to put coating compositions in a liquid state so they can be applied by brushing, dipping, spraying, roller-coating, etc. However, many other properties of the coating are controlled by the use of various solvents. These properties include setting or drying time, flow, degree of penetration into the surface, and gloss.

The choice of solvents to effect the properties desired is determined by the character of the binder used in the coating, the binder being the oil,

---

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials, paying for those published.*

Industrial Finishing wishes all of its friends a Merry Christmas and a Happy Prosperous New Year

"I find our JENSEN Infra-Red Oven and Conveyor System 7 WAYS BETTER"

. . . Writes

Walter E. Jacobson

General Manager

Yardley Industries

Columbus, Ohio

1 *"Cost* of our Jensen equipment was *at least 40% lower* than the cheapest of other such equipment!"

2 "We were in full production *one day* after receiving this new Jensen equipment!"

3 "Jensen horizontal flat bed conveyor *speeded our operations* tremendously . . . *reduced handling costs substantially!"*

4 "Production has been more than *doubled!"*

5 "We've been able to step up delivery schedules . . . get more business!"

6 *"Same* Jensen oven is ideally adapted to drying small miscellaneous parts as well as large channels!"

Whatever your finishing problem, you, too, can profit by Jensen ingenuity. Write us today!

JENSEN Specialties Inc.

America's Foremost Designers and Builders of Infra-Red Ovens • Conveyors • Paint Dip Tanks

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SERVICE BRANCHES in:

Atlanta, Ga. — Chicago — Cincinnati — Cleveland — Columbus, Ohio — Detroit — Franklin, Mass. — Grand Rapids, Mich. — Indianapolis — Philadelphia — Pittsburgh — Peoria, Ill. — Rockford, Ill. — Toledo, Ohio — Waterbury, Conn.

In Finishing Production . . . the Future Belongs To Men Who *Plan* For It!

varnish or synthetic resin used to act as the film-forming material.

Inasmuch as all of the solvents—that is, those used in preparing paint and those used to reduce it for application—disappear into the atmosphere, it is pure common sense to use as little such volatile liquids as are required to do the job.

The selection of a solvent combination involves a knowledge of the various grades, such as petroleum thinners, aromatic petroleum solvents, coal-tar solvents, terpine solvents, and lacquer solvents. The paint manufacturer who has formulated the paint is the firm to contact for specific reduction recommendations, based on your production line and quality requirements.

Practically all reliable paint manufacturers are willing to give specific information on the grade or brand name of the solvent they recommend for reduction of their paints. This is the solvent to use for safe and satisfactory results.—LOUIS E. MARTIN, Chief Chemist.

C. R. Syer, Industrial Engineer, Moves to California

C. Raymond Syer, consulting finishing and industrial engineer, formerly of Westport, Conn., has moved to California where he plans to continue as a consulting finishing engineer. His present address is 775 El Medio Ave., Pacific Palisades, Calif.

C. Raymond Syer, industrial engineer now located in the state of California.

Paint Driers; Use Them Sparingly

★ A paint drier is a substance which, when added to an oil, will cause a shorter drying time than that of the oil itself by speeding up the oxidation and polymerization reactions of the oil.

Driers are based on the drying actions of certain metals with cobalt, lead, manganese, calcium, iron and zinc being the most common ones used. These metals are put into paints in the form of soaps such as the napthenates, resinates and stearates. The type and amount of metal drier required is based on the amount and type of oil or resin used in the paint.

These driers, therefore, have been a boon to faster production, both in air-drying and baking finishes. However, they have some definite disadvantages.

1) They embrittle and thus shorten the life of a paint.

2) They discolor paint films, especially the light colors,

3) They tend to form skins.

Intelligent selection of driers and the use of proper amounts will hold these disadvantages to a minimum. Unfortunately, the personnel in some industrial concerns throw driers in their paints in a very haphazard manner.

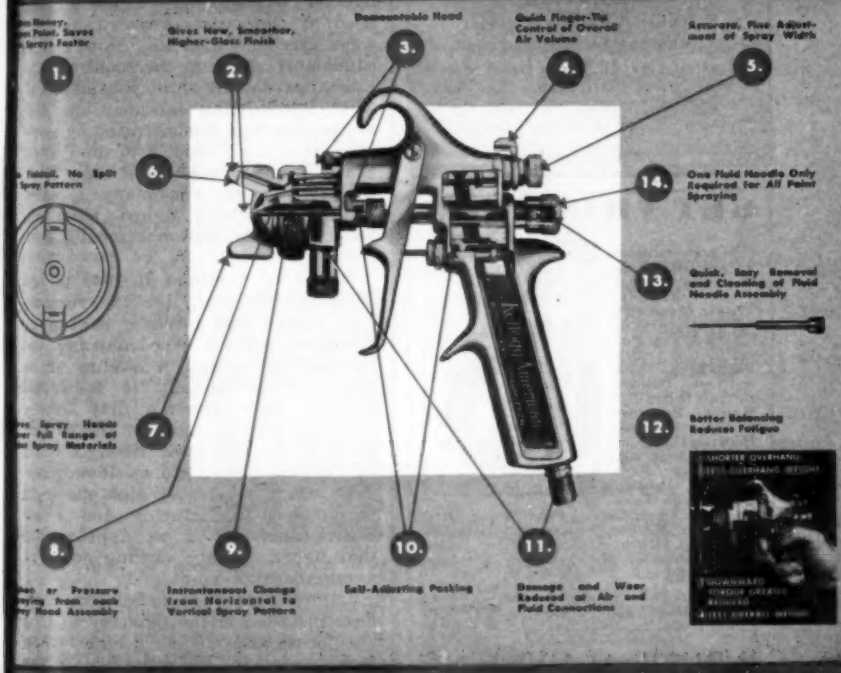
A good policy to pursue is to use as little drier as is absolutely necessary, and use it only after you have consulted with the manufacturer of the paint.—*Louis E. Martin, Chief Chemist, Plasteel Products Co.*

Industrial Oven Catalog

Young Bros. Co., 6500 Mack Ave., Detroit 7, Mich., offers a new 8-page catalog which illustrates and describes several models of standard laboratory ovens. Ovens that can be heated up to 600° F., by electricity, gas or steam, are available.

Brake Shoe

MICRO-SPRAY GUN


1.
2. Gives New, Smoother, Higher-Gloss Finish
3. Demountable Head
4. Quick Finger-Tip Control of Overall Air Volume
5. Accurate, Fine Adjustment of Spray Width
6.
7.
8.
9. Instantaneous Change from Horizontal to Vertical Spray Pattern
10. Self-Adjusting Packing
11. Damage and Wear Reduced at Air and Fluid Connections
12. Better Balancing Reduces Fatigue
13. Quick, Easy Removal and Cleaning of Fluid Needle Assembly
14. One Fluid Needle Only Required for All Paint Spraying

Brake Shoe MICRO-SPRAY Gun Alone Brings You These 14 Advantages

Water Wash Compounds
Spray Booth Coatings
Peelable Plastic Coatings

If your present compounds are doing the work, DON'T confuse yourself and take chances of your Booths clogging, by switching to other compounds.

HOWEVER, if your compounds are NOT doing the work, try CRYSTAL COMPOUNDS, which are packaged in humidity proof steel and fiber containers because they are pure alkali blendings without unnecessary fillers being added. Just forward to us, a few ounces of your paint for tests and recommendations as to correct compounds to be used. No obligations.

CRYSTAL LABORATORIES, INC.
CRYSTAL LAKE, ILLINOIS

Manufacturers of Water Wash Compounds, Spray Booth Coatings and Peelable Plastic Coating for the Leading Manufacturers of Spray Equipment

GET THIS BOOK

COLOR formulas and Useful Color Cards. Description, Properties, Theory, Harmony and Management of Colors. Furniture and Polychrome Finishing. Color and Light; Description of Color Pigments; Properties of Color Pigments; How Colors Are Prepared for the Trade; Basic Paint Pigments; Painting Oils; Volatile Thinners and Dryers; Genera: Paint Mixing Methods; Color Theory, Principles and Use; Colored Paint Mixing, Methods; Mixing Special Purpose Materials; Color Harmony and Management; Selecting Color Schemes.

296 Pages, Fully Illustrated with Color Chart and Drawings, Cloth. Price..... $2.50

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

Furniture Mart's Business Forecast

★ The furniture industry is clearing the decks for the 1949 Winter Market at the American Furniture Mart. Furniture manufacturers are gearing their operations for a buyers' market, and are preparing to meet competition with top values. They have made adjustments which will make their products more desirable in every way. They have seen that fresh new patterns are moving and all want to be ready with merchandise that will move off the retail floors.

Good selling will be the crying need of the year. America has always excelled in salesmanship, and is capable of rising to the requirements now apparent. A shining example of what hard-hitting salesmanship will accomplish was demonstrated by none other than the President of the United States who refused to accept "No" for an answer, and many a sales leader could take a leaf from his book. The man who makes calls, gets results.

It will be healthier if 1949 is not another year of broken records. You cannot pile increase on top of increases without over-balancing the pyramid at the top. A leveling off in sales volume already is indicated. October sales—for the first time—failed to surpass those of the earlier months. At the same time, it must be realized that October 1948 probably was the all-time high mark in furniture manufacturing and retail distribution, and if we approximate that figure, we are settling down at a mighty high point.

Improved production facilities have been installed in the industry so that the "break-even" point is higher than it was pre-war. We can all make far more than we thought possible at one time, and many stores have doubled

and trebled their volume. Good quality has paid off in 1948, and it should continue to pay off in 1949.—LAWRENCE H. WHITING.

Enamels Added to United Line of Products

The Organic Coatings Division of United Chromium, Inc., has announced the addition of a line of baking synthetic enamels to its line of Unichrome Finishes. A sizable group of formulations has been field tested for more than two years and, by modification, these formulations can be made suitable for almost any product, application technique, or baking cycle.

Included in the line are enamels based on urea-alkyds, vinyls and highly specialized resins. The enamels are stocked in white, tinted whites, and black, and may be obtained in special colors on order. Complete information on these finishes may be obtained from United Chromium, Inc., 51 E. 42nd St., New York 17, N.Y.

G. B. Work Joins Finishes Dept. of Atlas Powder

G. B. Work has just been appointed Assistant General Manager of the Industrial Finishes Department by Atlas Powder Company according to an announcement by E. H. Bucy, General Manager.

G. B. Work is now Assistant General Manager of the Industrial Finishes Dept. of Atlas P. Co.

Mr. Work, a native of Indiana, was employed by a large manufacturer of finishing materials in Cleveland, Ohio since 1928. He was Industrial Sales Manager of their Finishes Division in Pennsylvania for ten years. He will make his headquarters at Stamford, Conn., but will work with both branches of the Industrial Finishes Department at North Chicago and Stamford.

Atlas Industrial Finishes are now sold under the trade name Zapon.

PEEL-IT
PEELABLE PLASTIC COATING
It Peels Off!
QUICKLY AND EASILY
Applied by spray, brush or dip, forming a non-combustible film.
Protects all non-porous surfaces from overspray.
Peels off in one sheet.
WRITE FOR INSPECTION SAMPLE TODAY.
Harco Chemical Company
Industrial Cleaning Compounds
338 North Avenue, East
CRANFORD NEW JERSEY

Use
Crystal
TACK RAG
BEFORE YOU SPRAY
Will Not Generate Heat
Nor Smoke When Stored
in a Warm Place
Always Soft and "Tacky"
Speed Up Your FINISHING PRODUCTION LINE with this Soft Tacky Cloth
BCP TACKY WIPERS
Available in GROSS LOTS thru PAINT DEALERS or from the Processors
Industrial Size 10 x 36
Spontaneous Combustion Proof
Exclusively Processed by
BAUGHN CHEMICAL PRODUCTS CO.
7027 North Ravenswood Ave. . . . Chicago 26, U.S.A.

IT'S NEW

THORNTON'S Heavy Duty ELECTRIC BURNING KNIFE

A rugged, long-life knife with self-rest, heavy bronze ventilated blade. 6-foot Underwriter's cord. Knife point heating element furnishes constant even working temperature.

ORDER ONE
EACH.....$5.95

Try AMALGASOL

Repairs and rebuilds damaged finishes. Applied with pad. Used with stain where needed. It matches and completely refinishes rubbed through places in the finish.

Ready for Use.

GALLONS.....$8.25 **QUARTS.....$2.75**

L. M. Thornton Mfg. Co.

The wood finish authorities since 1914

2513—25 EAST 18TH STREET
KANSAS CITY 1, MISSOURI

Oliver McClintock Joins Glidden Company

Appointment of Oliver McClintock as assistant industrial manager of the Glidden Company is announced by W. D. Duncan, vice president.

Oliver McClintock becomes Assistant Industrial Manager of Glidden Company

For the past 14 years, Mr. Clintock has served another large manufacturer of industrial finishing materials, gaining wide experience in all phases of industrial paint sales and service. In his new capacity with Glidden, he will work directly under Mr. Duncan.

Devoe Elects Two Vice-Presidents

Devoe & Raynolds Co., Inc., announces that Andrew W. Bornhauser and Clarence W. Slocum were elected Vice-Presidents at a Board of Directors Meeting held in New York City, November 16th.

Mr. Bornhauser was elected Vice-President in charge of the Jones-Dabney Division of Devoe & Raynolds in Louisville, Ky., and has been associated with the Company over 29 years.

Mr. Slocum was elected Vice-President in charge of the Eastern Industrial, Railroad and Marine Division of Devoe & Raynolds located in Newark, N. J., and has been associated with the Company since 1913.

Clement Joins Black Mfg. Co.

The Black Mfg. Co., Baltimore, Md., makers of Black Arrow Paint Spray equipment, announces the appointment of S. W. (Bill) Clement as Southeastern District Manager, with headquarters in Atlanta, Ga.

Mr. Clement, well known to the automotive trade, was formerly Regional Manager of a concern in Chicago, Ill. Prior to his 15 years with the Chicago concern, Mr. Clement operated his own automotive shop, specializing in paints and spray apparatus.

Richard J. Blum, Sr., Founder of Kirk & Blum, Passes Away

R. J. Blum, Sr., co-founder and President of the Kirk & Blum Mfg. Co., Cincinnati, Ohio, manufacturers and designers of dust-collecting and fume-removal systems, died at his home in Cincinnati on Monday, October 18, 1948.

Mr. Blum was born October 9, 1886 in Cincinnati. Nineteen years later he met the late Sylvester W. Kirk, with whom he organized the company, which has grown to become one of the nation's leading fabricator's of dust-collecting and fume-removal systems.

Mr. Blum became President of the firm three years ago, succeeding to that position upon the death of Mr. Kirk. Surviving him are his widow, Mrs. Verena L. Blum, and son, R. J. Blum, Jr., Vice President of the Company.

Titus N. Radu To Handle Foreign Sales for Arco

The Arco Co., Cleveland and Los Angeles, manufacturer of industrial and automotive paints, announces the appointment of Titus N. Radu as foreign sales manager.

Mr. Radu, a native of Cleveland has had previous experience in foreign sales work. He is a member of the Export Managers Club of New York, Inc., Cleveland World Trade Association and Overseas Automotive Club.

OUTSTANDING PRODUCTION SPECIALISTS FOR CONTRACT PAINTING.

Any Type of Coating Applied to All Shapes, Sizes and Surfaces. A Decade of Service in Solving the Toughest Problems.

PYRAMID INDUSTRIAL FINISHING CO.
431-3 Southern Boulevard
New York 55—MElrose-5-3962

Alodine Prepares Aluminum For Organic Coatings

Developed by the American Chemical Paint Co., Ambler, Pa., alodine chemicals can be applied by dipping, spraying in a power washer, or by brushing. It forms an iridescent coating on the aluminum which stops corrosion and forms excellent base for finish coats.

GLOBE BRANDS

BRONZE POWDERS . . .
all shades and grades
for various purposes

•

ALUMINUM POWDERS AND PASTES

•

GOLD, SILVER, COMPOSITION AND ALUMINUM LEAF

B. F. DRAKENFELD & CO., INC.
45-47 Park Place New York 7, N. Y.

Your partner in Solving Bronze Powder Problems

Drakenfeld

"THE FINISHING TOUCH"

Engineers and manufacturers of conveyors, ovens, washers, and equipment for complete paint finishing systems . . . .

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BEHLEN

A great name for Colors

JAPAN COLORS

SINCE 1888

H. BEHLEN & BRO., INC. 10 CHRISTOPHER STREET—NEW YORK 14, NEW YORK

PACIFIC BRANCH—1749 BERKELEY ST., SANTA MONICA, CAL.

RESTORE PAINT IN 2 MINUTES

PER GALLON WITH

MIRACLE BLUE - BOY

5 GALLON PAINT REJUVENATOR

Paints, lacquers and enamel products can be restored to their original consistency without opening the can. Units available to handle from ⅛ pint to 50 gallon drums. Immediate delivery.

Originators of paint rejuvenating equipment---sixteen years—thousands of satisfied users.

Write for folder & prices

MIRACLE PAINT REJUVENATOR CO.
127 E. 9th Street St. Paul 1, Minn.

—SPRAY PAINTING—

Industrial and Commercial

Contains 169 pages. Fully illustrated. Cloth. Price.....$2.00

This new book covers the fundamental principles of spraying technique, together with the latest developments and practices of this craft. Covers common paint pigments, paint extenders, enamels, oil and spirit varnishes, shellac, lacquer, synthetics, all types of modern air guns, spraying technique, spraying standard materials, spraying defects, their cause and remedy, flock and suede finishes, striping and lettering, pearl lacquer finish, also automatic spraying, electrostatic spraying, agricultural spraying and automobile spraying. Ends with the sprayers "Ten Commandments."

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

THE LAMY CO.
INDUSTRIAL OVENS

760 PROSPECT AVENUE • CLEVELAND, OHIO

CONSULT US REGARDING: HEAT TREATING OVENS • CORE OVENS
PAINT OVENS • RUBBER CURING OVENS • AIR HEATERS, ETC.

Random Comment on the Industrial Scene

(Continued from page 8)

in size. Water, oil, scale and dirt, filtered from the air, can be removed simply and easily. The filtering element is replaceable. The filter may be had in ¼-in. to 1-in., National Pipe thread sizes.

* * *

Cost Reduction was the subject discussed at a large group meeting held recently in New York by the American Management Association, the Society for the Advancement of Management, and the American Supply and Machinery Mfrs. Association. Three divisions of business came in for attention, 1) office administration, 2) sales administration and, 3) material handling.

Industrial executives see possibilities of saving 12% to 30% per company in annual expenses on individual jobs. It was brought out that American industries spend more than 30-billion dollars a year in the largest field, sales management. One large industry reports an increase in sales cost of more than 10% in the last year.

Material handling is perhaps the next greatest cost item; through improved equipment coupled with engineering methods and skill, this is a prolific field for economies. Methods and equipment designed to keep the product moving mechanically will do much to reduce costs.

Office administration may represent the least in the upswing of costs, but

FOR ALL FINE FINISHES
TAC-ALL
TACK RAGS
Packed bulk or individually.
Prices and samples on request.
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ALAKA Lacquers
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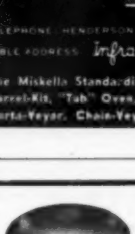

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Simplified crating and packaging, and standardization of products offer great possibilities of cost saving. Studies will be made in redesigning products to retain or enhance their appearance and at same time to simplify and reduce cost of production.

Save a Life. A new apparatus for treating pulmonary disorders resulting from exposure to certain chemicals, gases or superheated air in industrial processes has just been announced by Mine Safety Appliances Co., Pittsburgh. It also is used for emergency cases of asphyxiation.

* * *

Another Midget. Another new midget car called the "Gregory" was shown recently in Pittsburgh. Made of aluminum, it is 13½-ft. long, weighs 684-lbs., and will sell for less than $800. It is finished in natural aluminum. The manufacturer, Hoppenstand Motors, Inc., Greenville, Pa., claims 55½ miles per gallon of gas.

* * *

Traffic Paint for marking aisles in industrial plants, warehouses and parking lots has been developed which, it is said, will outlast anything heretofore used. It contains chlorinated rubber. The new material dries in 10 to 20 minutes. It may be applied to concrete, asphalt or wood.

* * *

An Automatic Spray Gun has been developed capable of an operating speed of 5400-cycles per hour. It is 7-in. long, and is controlled by an air-operated piston which provides positive, leak proof shut-off of fluid

and air at the end of each spraying cycle. Air caps and fluid tips are interchangeable with hand guns.

* * *

Lamp Lights Without Current. Science Service reports a new fluorescent lamp that requires no electricity, but will light when shaken. It is not intended for continuous illumination. The lamp contains an inert gas, a small quantity of mercury and one of the luminescent pigments known as phosphors, such as are used in the ordinary fluorescent lamps. Agitation of the mercury causes the phosphor to glow. This should make a good signal light in a spot where vibration is available.

* * *

New Upholstery Fabric is being developed. It is an extruded monofilament of vinylidene chloride. This plastic is said to have wearing qualities that will outlast any cloth, and may be washed with cleaning fluid or soap and water without staining.

* * *

Color Power: A striking example, showing how the use of color can glamorize and popularize a long-known and very ordinary utility article, is found in the Riegel Textile Corp.'s use of bright colors to give a new look to its heavy knit jersey gloves. Teen-agers, who formerly shunned white and brown jersey gloves, have gone for these bright colors in a big way. It's become a national teen-age fad—wearing "Hep-Mits" in mates of different colors, and incidentally keeping their hands warm while having outdoor fun this winter.

The idea of Hep-Mits is credited to Miss Peggy Ann Garner, youthful star of William Moss Productions who is now on the west coast making her next picture, "The Big Cat", which is to be released soon.

SAFEGUARD YOUR SPRAY BOOTHS

Layers of inflammable paint come off more quickly if you have applied Wyandotte Spray Booth Coating first. Only a thin coating makes cleaning easier, speedier, more economical.

And you can reduce your floor-cleaning costs with Wyandotte F-100*. Even heavy soil stands no chance against this remarkable compound.

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Glidden Promotes J. C. Rankin to Executive Assistant

The Glidden Co., manufacturer of finishing materials, Cleveland, Ohio, announces the promotion of James C. Rankin to the post of Executive Assistant.

James C. Rankin has been made Executive Assistant in the Glidden Co.

Mr. Rankin, formerly manager of specialty sales, joined the Glidden Company in 1942. He became director of Glidden's retail stores and then, during the war, served as a lieutenant in the Navy. Upon his return from service, he was made assistant to the manager of industrial and transportation sales.

13 Wyandotte Representatives Receive 25-Year Awards

Thirteen sales representatives of the J. B. Ford Division of Wyandotte Chemicals Corp. recently received gold watches commemorating 25 years of service to the company and its customers. This brings to 1342 the total number of Wyandotte Chemicals employees who have won quarter-century honors. Of this total, 82 watch award men and women are members of the J. B. Ford Division of Wyandotte Chemicals.

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An experienced New York or New England industrial finishes salesman, with customers who believe in him—can do much better for himself with a really fine line of synthetics and lacquers that back him up with service to match. Such a salesman can get an interesting offer for his services from a firm that's going places. Write for an interview with MR. R. ABLON FINISHES INCORPORATED, 84 Waydell Street, Newark 5, New Jersey.